

A DOCTRINE FOR DEFENSE OF  
A MAJOR URBAN POPULATION CENTER  
BY DIVISION AND LARGER UNITS

An abstract for a thesis presented to the Faculty of  
the U.S. Army Command and General Staff College in  
partial fulfillment of the requirements of the  
degree of

MASTER OF MILITARY ART AND SCIENCE

RICHARD H. SAWYER, Major, USA

Fort Leavenworth, Kansas  
1964

20000320 073

U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE

(Abstract Approval Page)

Name of Candidate RICHARD H. SAWYER, Major, USA

Title of Thesis A DOCTRINE FOR DEFENSE OF A MAJOR URBAN  
POPULATION CENTER BY DIVISION AND LARGER UNITS

Approved for Publication by:

Thomas R. Watson

, Research and Thesis Monitor

James E. Sumner

Assistant Research and Thesis Monitor

John W. Callaway

Assistant Research and Thesis Monitor

Date \_\_\_\_\_

The opinions and conclusions expressed herein are those of the individual student author and do not necessarily represent the views of either The United States Army Command and General Staff College or any other governmental agency. References to this study should include the foregoing statement.

The thesis from which this abstract is drawn develops a doctrine for defense of a major urban population center by division and larger units. The scope of the paper is limited to ground operations. The limited use of tactical special weapons and airborne and air assault techniques is considered briefly.

The thesis examines the battles for Aachen, Berlin, the Brittany Fortresses, and Stalingrad in considerable detail and the battles for Sevastopol, Smolensk, Strasbourg, and Vienna less intensively. From conclusions drawn, elements of common doctrine in the fields of personnel, logistics, civil affairs, intelligence, and plans and operations are generated. Three competing schemes of maneuver are also developed. These are tested and one selected as optimum. A final, consolidated doctrine is enunciated. Circumstances under which modification of the final doctrine might be beneficial are described and appropriate changes are proposed.

The battles which were studied revealed that the defense of a major urban population center may be undertaken for political or military reasons, or a combination of the two. Berlin was defended wholly as a matter of national prestige. The Brittany Fortresses were held to deny access to port facilities and to provide bases for the defender's

submarine fleet. Aachen exemplified the influence of combined causes. It was militarily significant as a bar to the industrial Ruhr district of Germany. It had political importance as the first German city to experience a ground threat. Stalingrad was retained as a base for future operations. It also served as a means by which the Soviets occupied strong German forces which would have been more destructive elsewhere.

The obstacle value of cities was illustrated by the protracted defenses of Berlin, the Brittany Fortress of Brest, Stalingrad and Vienna. The Soviet success at Stalingrad was shown to have been in large measure due to the natural fortifications provided by the rubble of a partially destroyed community.

When cities with assailable flanks were strongly defended, the attacker frequently chose envelopment as the principal offensive tactic. Aachen, Berlin, and Vienna were outflanked prior to conquest. The inability of the Germans to accomplish the same thing at Stalingrad was shown as contributory to their ultimate failure there.

Elaborate fixed fortifications were used by the defenders of Aachen, the Brittany Fortresses, and Sevastopol. Expensive to construct, these works were shown to have been of questionable value when compared with simpler field construction.

The need for simple organization and adequate defense planning was illustrated by events at Aachen, Berlin,



Brittany, Strasbourg, and Vienna. Berlin, defended without benefit of a formal defense plan, experienced great confusion due in part to a lack of centralized operational command. Aachen, Brittany, and Strasbourg were defended by forces handicapped by inefficient preparatory efforts; complex command structures retarded achievement of maximum readiness. At Vienna, acceptable control of the operation was maintained despite an awkward command arrangement.

The relative effectiveness of trained, regular troops and paramilitary units was represented by their performance at Aachen, Berlin, Brittany, Stalingrad, and Vienna. Regular soldiers performed creditably in all cases. Paramilitary elements or second line troops acted acceptably at Aachen and Brittany but poorly at Berlin and Vienna. Stalingrad showed the worth of soldiers specially trained for city fighting. The principal disadvantage of the use of other than regular troops was the unpredictability of their behavior.

At Aachen, Stalingrad, and Vienna the defender's ability to move combat power to meet enemy threats played an important part in whatever success was achieved. The city's restriction of movement by the attacker was also found to be significant.

Sustained logistic support was determined to be a key factor in a successful defense. At Stalingrad, the Soviets were able to maintain a flow of supplies by making use of a variety of means of transport. The city was held until

relief. At Sevastopol, the attacker was able to cut the interior supply lines of a heavily protected and garrisoned fortress by use of aerial and artillery interdiction. The fall of the bastion was speeded by shortages of ammunition and rations which resulted from that action. The defense of Aachen was similarly curtailed by an encirclement of the city.

The problem of treatment of the civilian population was illustrated by the battles of Aachen, Berlin, Stalingrad, and Smolensk. Marshalling of the civilian resource for assistance in defense preparations was poorly done at Aachen and Berlin but more effective at Stalingrad. Interference with military activities occurred at Aachen and Smolensk. No standard technique for the control of the population was found. Civilians at Strasbourg were forced to remain in place while those at Aachen were directed to evacuate. Voluntary evacuation was permitted at other centers.

The fallacy of a defense concept based upon an isolated force was intimated by the results of the battles for the Brittany Fortresses and Sevastopol. Troops lost to the defender, through containment or ultimate capture, were shown to outnumber comparable losses to the attacker.

From the factors presented above and from other, more detailed considerations illustrated by the battles, the thesis develops common elements of doctrine. Essential portions of personnel doctrine concern the nature of forces

involved and measures which can be taken to improve unit proficiency and maintain morale. The use of well trained, regular troops for active operations is held to be essential. Paramilitary forces and civilians may be employed for non-critical defense tasks and for construction and service tasks, respectively. Unit proficiency can be improved by the assignment of cadremen experienced in city combat and by the use of indigenous personnel as guides and interpreters. Key factors in the maintenance of morale are attainment of small unit and individual competence, the provision of creature comforts, and the frequent appearance of higher echelon commanders.

Salient points of logistics doctrine deal with the importance of adequate supply and coordinated construction efforts. Limited stockpiling, first of food and medical supplies, then of barrier materials, and lastly of fuel and ammunition, is designated as the preferred method by which to attain satisfactory provisioning. The development of emergency systems for input of bulk commodities is also called for. Continuous flow of general supplies must be maintained despite enemy interdiction. The use of multiple modes and routes of transportation and operations under conditions of reduced visibility are mandatory. Consideration should be given to the use of requisitioned civilian transport. Construction, performed to the maximum extent by civilian labor, must support the defensive scheme of maneuver. Emphasis is placed upon erection of field

fortifications positioned to channel enemy attacks into routes most favorable to the defender.

Most effective use of the civilian population and phased evacuation comprise the major portions of civil affairs doctrine. The importance of cooperation among all agencies involved in the administration is also stressed. The doctrine conceives of early displacement of women, children, and others incapable of assisting in the defense activity. Within the provisions of the laws of land warfare, able bodied males are employed in construction or other defense efforts. They are evacuated when preparations are completed. Small numbers of civilians are permitted to remain in the center to participate in support activities during the active defense.

Intelligence doctrine is directed at the early and continuing collection of very detailed information concerning the center and its surroundings. Sources of such data are indicated as maps of all kinds, public and private documents, and the knowledge of local inhabitants. The need for active combat troop participation in the acquisition of information is emphasized, as is the requirement for the rapid dissemination of processed material. The importance of counterintelligence in the defense of hostile centers is stressed.

The thesis notes that since centers are defended for military or political reasons, or both, the decision to defend may be made at the national level. The military must

appraise the effects of a projected defense upon broader operations and must elicit early decisions from higher authority.

The paper proposes, as an element of doctrine, that a common higher headquarters coordinate and supervise the activities of commands responsible for planning and execution of the defense and commands responsible for defense preparations.

The study examines the effects of the reasons for the defense, strength of available forces, terrain, and the enemy threat. Any of the factors may influence the location and nature of the defense. The defender may influence the enemy threat by choice of maneuver. The center is shown as contributing to the combat power of the defender. Optimum use of that combat power enables the defender to provide maximum security for the center. Combat power may be transferred from the center by acceptance of a reduced assurance of impenetrability there. The greatest effect of total combat power is gained when the center is used both for economy of force and as a restriction to enemy maneuver on its flanks.

The thesis proposes, as an element of doctrine, that initial major contact with the attacker be made well forward by strong forces which may accept decisive engagement if the situation warrants.

Three differing main schemes of maneuver are developed by the thesis. The first, the fortress concept, requires

the use of permanent fortifications and garrisons, supplemented by external defense forces which fall back upon the center without significant delay and accept siege. In the second scheme, called the modified fortress concept, field fortifications ultimately retain a part of a larger defense force which, when forced back upon the center, ultimately withdraws and allows the remaining elements to accept siege. The third course is a free defense in which a larger defense force integrates the center into the defense of its zone, attempts to hold the center by strong, mobile protection of both center and flanks, and withdraws rather than accept isolation of elements in the center.

A simple test of the schemes of maneuver shows that friendly use of isolated forces permits the enemy to increase force superiority away from the center and that the free defense is the most desirable of the schemes tested. Reasons for the latter conclusion are the free defense's ability to hold relative force at a constant level, its safety, and its most effective use of added combat power provided by the center.

An analysis is made of the effects of special circumstances upon the selection of the optimum scheme of maneuver. The investigation reveals that ordinary terrain may aid the free defense but that geographic isolation of a center may force the use of a fortress defense. If retention of the center is mandatory, the use of the smallest force consistent with the mission is favored. An enemy

decision to attack, rather than contain, an isolated force supports the use of small stay-behind elements. The use of either the fortress or free defense is shown to be acceptable when tactical special weapons are employed. Limited enemy use of airborne or air assault attack favors the fortress concept and requires special vigilance when the free or modified fortress defenses are considered.

From the evaluation and testing the final doctrine is derived. Elements of common doctrine, described above, are included. The portion of the doctrine dealing with the main operational scheme of maneuver is quoted here in its entirety:

"The defense of the center will be integrated with other defense operations in the zone in which the center is located. The presence of the center will exert no disproportionate influence on the nature of the defense of the zone. Area or mobile defense may be selected as appropriate.

"The built-up area of the center provides a valuable obstacle for use by the defending forces. It serves to increase available combat power by permitting relatively small forces to hold a sizable portion of the zonal defense position. Forces not required for the defense of the center proper are used to increase defensive strength elsewhere. The existence of the center by itself does not dictate the use of a static defense of the terrain surrounding it. The defense there may make best use of its combat power by

utilizing its mobility to the maximum and by degrading that of the enemy by channeling his attacks toward the obstacle formed by the center.

"The defense is conducted in a manner which makes possible the maximum application of friendly combat power. Major effort is devoted to the guidance of attacks into unfavorable or restrictive terrain in which counterattacks will be most effective.

"The defense will be initiated by strong forces positioned on good defensive terrain well forward of the center. Rivers, mountain or hill masses, swamps, or manmade obstacles may be used to strengthen the forward positions. Special erection of barrier systems and field fortifications may be undertaken provided such efforts do not detract from construction in support of the main defense system. Forward forces prevent surprise of the main defense, cause the enemy to lose momentum and to deploy, and provide information concerning the attacker's most probable course of action. Forward forces may accept decisive engagement if the probability exists that enemy combat power may be reduced significantly.

"If withdrawal of the forward forces is made necessary, new, prepared positions are occupied. These include locations within the center and strongpoints in the terrain on the flanks of the center.

"All available defense forces are used to halt further advances. Combat power is so distributed that maximum



advantage is taken of the obstacle value of the center. If terrain features exist which tend to partition the defense, combat power will be distributed to assure capability of semi-independent action by forces within the partitions.

"Maximum mobility of the total defense is gained by limiting forces within the center to those necessary to deny rapid movement to the attacker. If a protracted defense is anticipated, vehicles and equipment surplus to the needs of the forces in the center may be reallocated to those outside the center, thus further improving the mobility of the entire defense. Under similar circumstances, artillery, usually attached or organic to elements in the center, may be reduced in strength to provide more firepower to units conducting mobile portions of the defense. Adequate anti-tank and engineer capability must be allowed to remain with the forces in the center. Tactical deception may be employed to create the impression of greater strength in the center.

"Encirclement constitutes the greatest threat to strongly defended centers. Encirclements are defeated by the use of powerful mobile forces whose counterattacks are directed against the flanks of the initiating penetrations. The center restricts maneuver of attacking forces seeking to penetrate at or near its flanks. The defense will stress the use of the center as a fixing element against which the attacker will be driven by the counter attack force. Barriers and fortifications outside the center will be arranged

to assist this maneuver. Voids in the barrier system will be provided through which enemy attacks will be channeled.

"Counterattacks may be mounted by local or higher echelon reserves. Reserves will be positioned so as to facilitate major counterattacks against flank penetrations, provision of light forces for use on the flanks of the center in support of the counterattacks, and, exceptionally, provision of reinforcements for elements in the center.

"Throughout the conduct of the defense, contact will be maintained between elements actively engaged in the operations at or near the center and those in other portions of the defense zone. All forces will remain specially vigilant against airborne or air assault attacks aimed at severing contact or impeding the movements of reserves.

"If the attacker forces withdrawal of flank or center forces or achieves significant penetrations which cannot be eliminated, the positions of elements are adjusted to assure that contact is maintained. Forces in the center may delay through it if this is necessary to preserve contact with flank elements. All possible measures are taken to resist encirclement of the center or its defense force.

"If the attacker achieves deep penetrations or envelopments which cannot be contained and which seriously threaten the defense force in the center, that force will withdraw. Denial operations and demolitions will be performed in consonance with existing guidance. Measures to recapture the center or to continue the defense to its rear

will be taken as appropriate."

Geographic isolation and mandatory retention are treated by the thesis as special cases. The conclusions reached during analysis of special situations are applied to modify the basic doctrine. Specific changes, for use in these extraordinary circumstances, are proposed.

A DOCTRINE FOR DEFENSE OF  
A MAJOR URBAN POPULATION CENTER  
BY DIVISION AND LARGER UNITS

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements of the  
degree of

MASTER OF MILITARY ART AND SCIENCE

RICHARD H. SAWYER, Major, USA

Fort Leavenworth, Kansas  
1964

U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE

(Thesis Approval Page)

Name of Candidate RICHARD H. SAWYER, Major, USA

Title of Thesis A DOCTRINE FOR DEFENSE OF A MAJOR URBAN  
POPULATION CENTER BY DIVISION AND LARGER UNITS

Approved by:

Thomas R. Watson, Research and Thesis Monitor  
James E. Simmons, Assistant Research and Thesis Monitor  
John W. Callaway, Assistant Research and Thesis Monitor

Date \_\_\_\_\_

The opinions and conclusions expressed herein are those of the individual student author and do not necessarily represent the views of either The United States Army Command and General Staff College or any other governmental agency. References to this study should include the foregoing statement.

## ACKNOWLEDGMENTS

The author gratefully acknowledges the use of the illustrations listed below:

PLATES I, II, III	<u>United States Army in World War II:</u> <u>European Theater of Operations:</u> <u>The Siegfried Line Campaign</u> by Charles MacDonald.
PLATES IV, V	<u>The German Defense of Berlin</u> by Wilhelm Willemer.
PLATES VI, VII, VIII	<u>United States Army in World War II:</u> <u>European Theater of Operations:</u> <u>Breakout and Pursuit</u> by Martin Blumenson.
PLATES IX, XI, XII	<u>Operations on the Russian Front</u> United States Military Academy.
PLATE X	<u>The Year of Stalingrad</u> by Alexander Werth.
PLATE XIII	<u>Panzer Leader</u> by Heinz Guderian.
PLATE XIV	<u>Crusade in Europe</u> by Dwight D. Eisenhower.
PLATE XV	<u>Combat in Vienna</u> by Rudolf von Buena.

Complete references to the above works may be found in the bibliography.

## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS . . . . .	iii
LIST OF ILLUSTRATIONS . . . . .	iv
INTRODUCTION . . . . .	1
Chapter	
I. THE BATTLE FOR AACHEN . . . . .	7
II. THE BATTLE FOR BERLIN . . . . .	27
III. THE BATTLES FOR THE BRITTANY FORTRESSES . . . . .	48
IV. THE BATTLE FOR STALINGRAD . . . . .	69
V. THE BATTLES FOR SEVASTOPOL, SMOLENSK, STRASBOURG, AND VIENNA . . . . .	90
VI. EVALUATION AND DERIVATION OF PERSONNEL, LOGISTICS, CIVIL AFFAIRS, AND INTELLIGENCE DOCTRINE . . . . .	116
VII. EVALUATION AND DERIVATION OF PLANS AND OPERATIONS DOCTRINE . . . . .	141
VIII. TESTING OF COMPETING ELEMENTS OF DOCTRINE . . . . .	160
IX. A PROPOSED DOCTRINE FOR DEFENSE OF A MAJOR URBAN POPULATION CENTER . . . . .	176
BIBLIOGRAPHY . . . . .	189

# LIST OF ILLUSTRATIONS

Plate		Page
I	Aachen - Location and Situation . . . . .	8
II	Aachen - Early Phase . . . . .	12
III	Aachen - Late Phase . . . . .	15
IV	Berlin - Location and Situation . . . . .	28
V	Berlin - Defenses . . . . .	30
VI	Brittany - Location and Situation . . . . .	50
VII	Brittany-St. Malo Defenses . . . . .	52
VIII	Brittany-Brest Defenses . . . . .	54
IX	Stalingrad - Location and Situation . . . . .	70
X	Stalingrad - The Bridgehead . . . . .	72
XI	Sevastopol - Location and Situation . . . . .	91
XII	Sevastopol - Defenses . . . . .	96
XIII	Smolensk - Location and Situation . . . . .	99
XIV	Strasbourg - Location . . . . .	105
XV	Vienna - Location and Situation . . . . .	111
XVI	The Fortress Defense Concept . . . . .	161
XVII	The Modified Fortress Defense Concept . . . . .	163
XVIII	The Free Defense Concept . . . . .	165



## INTRODUCTION

The purpose of this study is the development of a doctrine for defense of a major urban population center by division and larger units. The study was undertaken because there is no existing doctrine for such defense and because, as urban centers grow and new ones are created, the problem posed to the military by their presence takes on increasing importance.

The scope of this paper is limited to an examination and analysis of essentially conventional operations. The effects of the tactical use of special weapons and supporting operations by air delivered troops are explored. Excluded from consideration is defense against massive nuclear attack or area saturation by chemical or biological agents. Should an attacker resort to mass destruction, the value of an urban population center to the defender would be reduced so radically as to make the conduct of a determined defense unlikely. The delivery means needed for high yield nuclear weapons or great quantities of toxic agents would operate over great distances and in a manner largely unaffected by the choice of the ground scheme of maneuver.

Similarly omitted is consideration of defense against attacks which are exclusively or substantially airborne or airmobile in nature. The rarity of such attacks and the

requirements which they impose for highly specialized defensive techniques both argue for their omission from a paper intended to develop a general doctrine for ground defense.

To avoid unrealistic bias in favor of the defender, the author limits assumed defensive weapon and airborne force use to the same levels as those granted the attacker.

Activities relating to the defense of urban population centers may occur at very high military or national echelons. These activities are discussed but the majority of emphasis is placed upon tactical operations. Since the size of a center and the circumstances of its involvement may vary considerably, there is no attempt made to categorize doctrine as being particularly applicable to division, corps, or field army.

Solution of the problem requires an initial definition of its essential elements, "defense" and "major urban population center." The first of these is described by FM 61-100 as follows:

Defense is a basic form of combat in which the purpose is to prevent, resist, repulse, or destroy an enemy attack. The defense is undertaken to develop more favorable conditions for subsequent offensive operations, to deny entrance of the enemy into an area, to reduce enemy combat capability with minimum losses to friendly forces, to trap and destroy hostile forces, or as an economy of force measure.<sup>1</sup>

---

<sup>1</sup>U.S., Department of the Army, Department of the Army Field Manual FM 61-100 The Division (Washington: Department of the Army, 1963), p. 127.

Any of the designated motives may be involved in the defense of a major urban population center. Regardless of motive, however, the author conceives of the defense of a center as requiring a willingness on the part of the defender to accept decisive engagement. While lesser degrees of resistance, screening or delay, may be used as part of the defensive scheme of maneuver, the defender must, at some stage of the contest, stand and fight to exclude the enemy from his objective.

The term "major urban population center" has no formal definition upon which all experts are in agreement. For purposes of this paper, the author accepts criteria put forward by some urban geographers. These are that a region becomes "urban" when its population density exceeds 1,000 persons per square mile<sup>2</sup> and the total population exceeds 10,000.<sup>3</sup> The importance of an urban population center is also a function of its geographic, economic, social, and cultural position within the state of which it is a part. Based upon the foregoing, the author proposes the following definition of a major urban population center:

"A major urban population center is a region, the population density of which exceeds 1,000 persons per square mile, the total population of which exceeds 10,000, and the

---

<sup>2</sup>Griffith Taylor, Urban Geography (New York: E. P. Dutton and Company, Inc., 1946), p. 175.

<sup>3</sup>Ibid., p. 5.

geographic, economic, social, or cultural attributes of which make it politically or economically significant to the nation of which it is a part."

A major urban population center is a unique entity, the defense of which engenders unique problems and may require special techniques.

This study investigates the problems and techniques by examining historical cases. It projects the lessons drawn therefrom into proposed doctrine. In chapters I through IV the battles of Aachen, Berlin, the Brittany Fortresses, and Stalingrad are examined in detail, first by viewing the progress of the battle and then by noting the salient features in the fields of personnel, intelligence, plans and operations, logistics, and civil affairs. Chapter V presents brief resumes of the battles of Sevastopol, Smolensk, Strasbourg and Vienna, and develops key points of interest derived from them. The historical chapters are used to familiarize the reader with selected battles and to present information upon which later evaluations are based.

Chapters VI and VII are concerned with the analysis of the information to identify the real differences in the approaches taken by defenders in the past, and with the formulation of competing doctrines which might be used in the future. Each of the functional areas of personnel, intelligence, plans and operations, logistics, and civil affairs is examined individually. Conclusions are drawn concerning the merits of techniques used in the battles and other techniques

which occur to the author. From the conclusions the elements of two bodies of doctrine are formulated. The first of these is doctrine the adoption of which would make optimum the functioning of any defensive scheme of maneuver. It is doctrine which derives from combat experiences which were essentially common to all of the battles examined. The second body of doctrine concerns the defensive scheme of maneuver itself. Various defenders solved this problem in different ways. From the varied solutions come competing doctrines which require testing to establish comparative merit. Chapter VI deals with doctrine in the functional areas of personnel, logistics, civil affairs, and intelligence, all of which is common to any scheme of maneuver. Chapter VII deals with plans and operations. Some of the doctrine is common, but the principal part, the scheme of maneuver, may display wide variation. Three competing sub-doctrines, based upon different schemes of maneuver, are developed for further evaluation and test.

Chapter VIII is concerned with the testing of the competing doctrines. Working from a highly simplified hypothetical situation, the author derives the gross advantages and disadvantages of different concepts of defense. He notes the anticipated effects of changes in the hypothetical situation including the injection of tactical special weapons and limited airborne forces. He concludes that one of the doctrines is superior to the others in most circumstances.

In chapter IX the doctrine for defense of a major urban population center is consolidated and restated. Some conditions under which exceptions to the doctrine might improve the defense are noted and the appropriate modifications are suggested.

## CHAPTER I

### THE BATTLE FOR AACHEN

The battle for Aachen illustrates the defense of a major urban population center by forces using a fortified line located before a city. It had its beginnings in the great Allied offensive of the summer of 1944. By the end of August of that year the Allies had thirty seven divisions operating on the continent of Europe.<sup>1</sup> Many of these were closing on the borders of Germany.<sup>2</sup>

The Seventh German Army was one of the major units falling back through Belgium. On 4 September 1944 its command post was at Hex, Belgium and it was there that General der Infanterie a.D. Friedrich August Schack was given command of the German LXXXI Corps. At that time the northern boundary of the corps was drawn as Louvain -- Hasselt -- Maastricht -- Duesseldorf and the southern boundary as Liege -- Eupen -- Roetgen -- Schmidt; the city of Aachen lay in the corps sector.<sup>3</sup> (PLATE I) Of its strength and disposition, General Schack said:

---

<sup>1</sup>Dwight D. Eisenhower, Crusade in Europe (New York: Doubleday and Company, Inc., 1948), p. 289.

<sup>2</sup>Ibid., p. 321.

<sup>3</sup>Friedrich Schack, "LXXXI Corps (4-21 September 1944)." Heidelberg: Historical Division, United States Army, Europe, n.d., Introduction.

# PURSUIT TO THE GERMAN BORDER

26 August - 11 September 1944

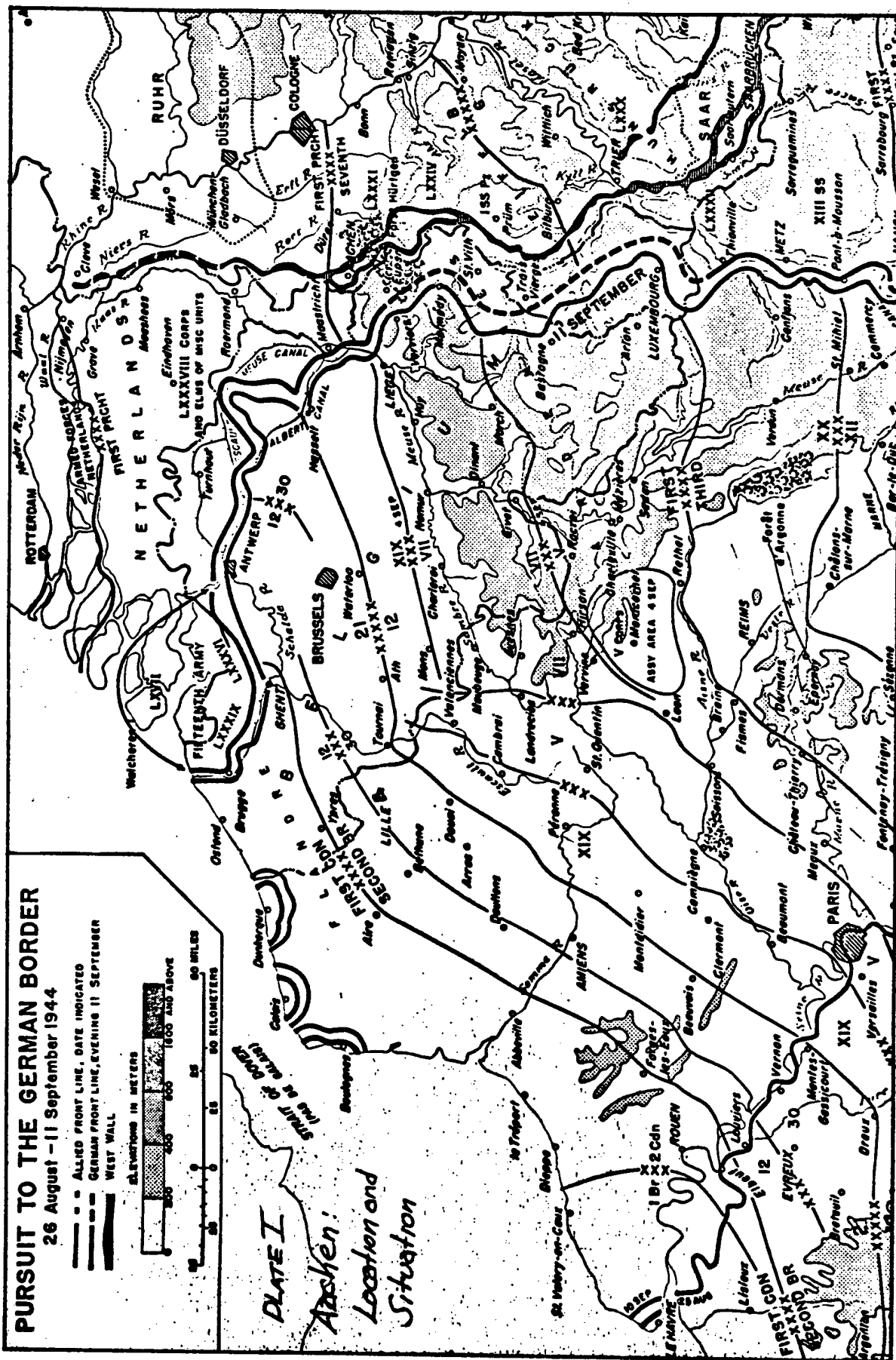
- - - ALLIED FRONT LINE, DATE INDICATED
- - - GERMAN FRONT LINE, EVENING 11 SEPTEMBER
- - - WEST WALL



ELEVATIONS IN METERS



PLATE I  
Appendix  
Location and  
Situation





The LXXXI Corps had at its disposal a few Kampfgruppen composed of the remains of several divisions, and the 353d Division, which had been pushed northward via Valenciennes--Brussels and was now concentrating south of Eindhoven (Holland). . . . The 116th Panzer Division was in the vicinity of Gembloux and Fleury, in front of the LXXIV Corps sector, and the 347th Division, held a thin security line, north of Namur.<sup>4</sup>

Additionally, the corps had two other subordinate infantry divisions with which it had lost contact. These were the 275th and the 49th.<sup>5</sup>

With these forces, LXXXI Corps was to carry out its part in the establishment of a "loosely-connected defensive front along the line Louvain--Charleroi."<sup>6</sup> This was never done. Allied elements entered Louvain and the withdrawal to the east continued.

In the period 4 September through 7 September the corps established contact with the First German Parachute Army on its right and gained control of the 49th and 275th Infantry Divisions. It fell back, in a series of delaying actions, to the Meuse River.<sup>7</sup> Namur was lost and Hasselt threatened.<sup>8</sup>

On 8 September the corps held the line of the Meuse

---

<sup>4</sup>Ibid., p. 2.

<sup>5</sup>Ibid., p. 3.

<sup>6</sup>Ibid., Introduction.

<sup>7</sup>Ibid., pp. 3-6.

<sup>8</sup>Paul Mahlmann, "353 Infantry Division (24 July - 14 September 1944) Report of the Commander." Heidelberg: Historical Division, United States Army, Europe, n.d., p. 43.

from Maastricht in the north to Jupille, northeast of Liege, in the south. The 353d, 275th and 49th Divisions held the river. The 116th Panzer Division was designated corps reserve, but the 347th was withdrawn from corps control and given to the LXXIV Corps. On the afternoon of 8 September the reserve was ordered to counterattack in the Liege area; that city had lately been included in the corps sector and was being encircled. The counterattack failed.<sup>9</sup>

From 9 September through 12 September, under heavy Allied pressure, the corps fell back upon the West Wall and Aachen. Dalhem, Neufchateau, Argenteau, and Eupen were lost and American forces entered the Aachen Municipal Forest north of Hauset.<sup>10</sup> By the end of the period Allied troops were either into the first belt of the West Wall (which passed to both east and west of Aachen) or were standing immediately before it.<sup>11</sup> Only in the north were the Allies some distance from the German fortifications.<sup>12</sup> There elements of the 275th and 49th Divisions held a tenuous line from a point a few miles west of Maastricht along the Maastricht--Aachen Highway.<sup>13</sup>

---

<sup>9</sup>Schack, op. cit., p. 10.

<sup>10</sup>Ibid., pp. 13-19.

<sup>11</sup>Charles MacDonald, United States Army in World War II: European Theater of Operations: The Siegfried Line Campaign. (Washington: Office, Chief of Military History, Department of the Army, 1963), Map IV.

<sup>12</sup>Ibid., p. 105.

<sup>13</sup>Schack, op. cit., p. 25.

From 13 September through 21 September LXXXI Corps fought hard to maintain the integrity of the West Wall and hold Aachen. (PLATE II) General Schack described the disposition of his forces on the evening of 13 September as:

275th Division's Kampfgruppe at the Maastricht -- Aachen highway; right wing at the road running south from Heer, left wing at Margraten (exclusive).

49th Division's Kampfgruppe at the West Wall.

353d Division's Kampfgruppe together with the combat commandant of Aachen and the troops employed in the West Wall, at the Eynatten -- Forstbach road.

9th Panzer Division's Kampfgruppe at the West Wall as far as the left sector boundary along the southern border of Roetgen toward Mambach -- Hetzingen.<sup>14</sup>

The 116th Panzer Division was corps reserve.

In the next eight days the corps deployment was radically altered. The 275th Division was driven from Maastricht and the Maastricht -- Aachen highway line was eliminated. By 19 September the German line north of Aachen lay just to the west of the Wurm River, about one mile forward of the West Wall. American forces on the southeastern outskirts of Aachen advanced to within a mile and a quarter of the center of the city. Other attacking units had driven northeast and had penetrated as far as Schevenhutte, ten miles due east of Aachen.<sup>15</sup> Closer to the city they held Eilendorf, about two and a half miles east of its center. The attackers were within about seven miles of encircling the city.<sup>16</sup>

---

<sup>14</sup>Ibid., pp. 25-26.

<sup>15</sup>Ibid., pp. 37-43.

<sup>16</sup>MacDonald, op. cit., p. 75.

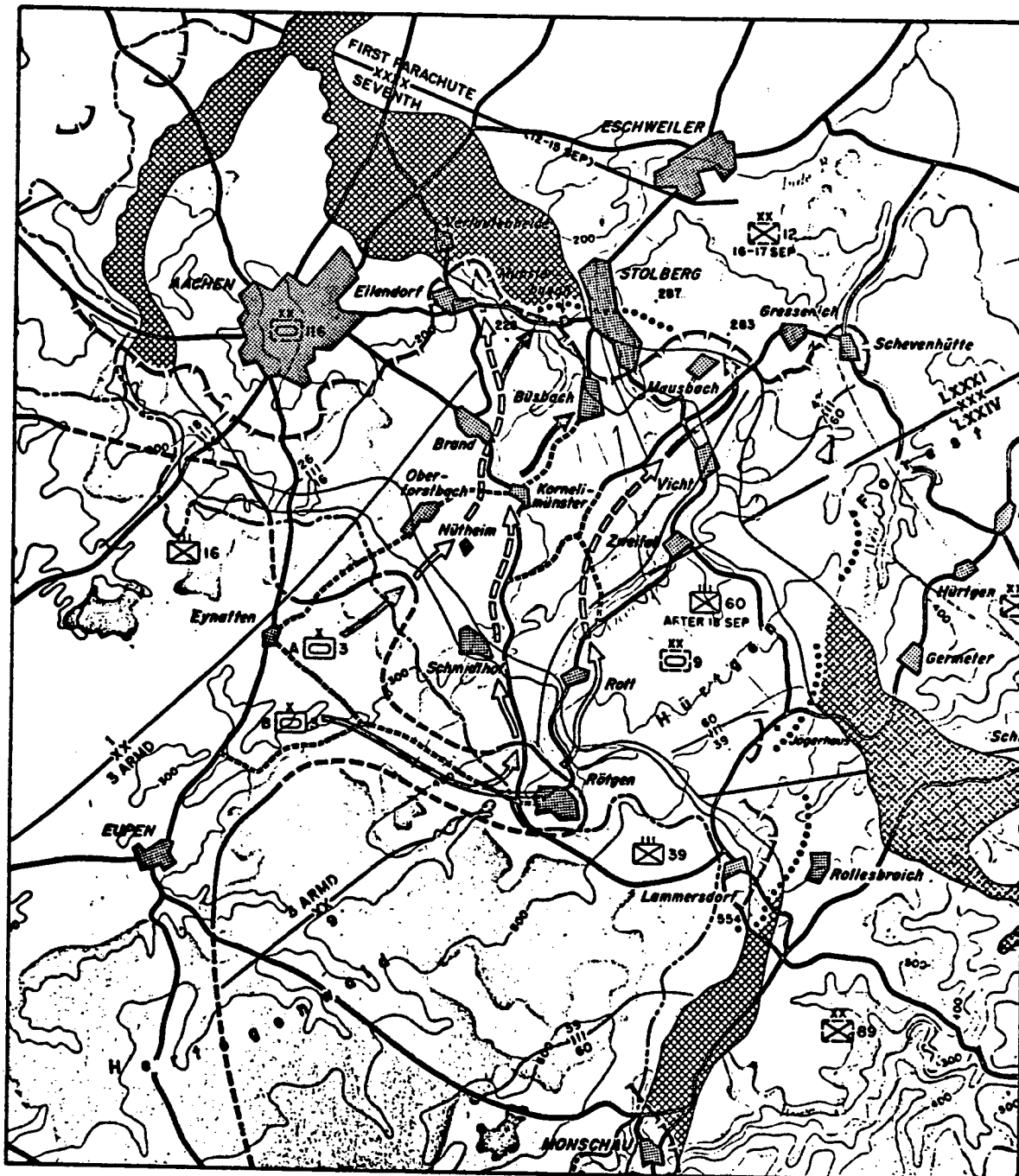


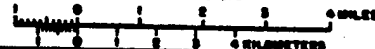
Plate II  
Aachen:  
Early Phase

**BREACHING THE WEST WALL  
SOUTH OF AACHEN  
VII CORPS**

12-29 September 1944

- U.S. POSITIONS, NIGHT 12 SEP
- ADVANCE BY EVENING 16 SEP
- GAINS BY THE END OF SEP
- AXIS OF U.S. ARMORED ATTACK, 12 SEP
- AXIS OF U.S. ARMORED ATTACK, 13 SEP
- AXIS OF U.S. ARMORED ATTACK, 14 SEP
- AXIS OF U.S. ARMORED ATTACK, 15 SEP
- WEST WALL

Elevations in meters



The Americans had pierced the West Wall's second belt which passed to the east of Aachen. The timely arrival of the full strength 12th Infantry Division, and its immediate commitment in the Eilendorf area prevented further incursions to the east.<sup>17</sup> Similarly, the newly arrived 183d Volks Grenadier Division had been the stabilizing force in the northern zone.<sup>18</sup> It was its use which prevented the entry of American forces into the West Wall north of Aachen. While the Americans did not doubt their ultimate ability to continue the attack, the capability of the Germans to muster effective reinforcements temporarily discouraged any such attempt.<sup>19</sup>

The fighting during the period 13 September through 21 September was characterized by fierce, small unit actions and counterattacks involving elements of regimental size.

On 22 September General Courtney Hodges, commanding the United States First Army, and responsible for the Aachen area, suspended further offensive actions.<sup>20</sup> It was not until 2 October that they were resumed.<sup>21</sup> In the interim, the Americans concentrated artillery and air strikes in the zone north of Aachen.<sup>22</sup> Despite this, the Germans remained

---

<sup>17</sup>Schack, op. cit., p. 33.

<sup>18</sup>Ibid., p. 41.

<sup>19</sup>MacDonald, op. cit., p. 114.

<sup>20</sup>Ibid., p. 251.

<sup>21</sup>Ibid., p. 260.

<sup>22</sup>Ibid., p. 258.

more concerned about possible further attacks from the pocket east of the city.<sup>23</sup>

On 21 September the LXXXI Corps commander, General Schack, had been relieved and replaced by General der Infanterie Friedrich J. Koechling. At his direction the lull was used to build up the combat power of the 12th and 246th Infantry Divisions in the southern zone. The latter division had replaced the 116th Panzer Division which had been withdrawn into theater reserve for refitting. LXXXI Corps had also lost the 275th and 353d Infantry and 9th Panzer Divisions, the former by transfer to the LXXIV Corps and the latter two as a result of a boundary shift on 16 September.<sup>24</sup>

When the Americans finally struck across the Wurm River near Palenberg in the northern zone the Germans were taken by surprise.<sup>25</sup> Although the fighting took place in some urban areas and in unfavorable terrain, the Americans had, by 7 October, advanced through the West Wall and as far as Alsdorf.<sup>26</sup> (PLATE III) They were, at that point, only five miles from their comrades in the south.

During the period 2 October through 7 October the LXXXI Corps was unable effectively to assist the embattled 183d Volks Grenadier and 49th Infantry Divisions which held

<sup>23</sup>Friedrich Koechling, "The Battle of the Aachen Sector (September - November 1944)." Heidelberg: Historical Division, United States Army, Europe, 1945, p. 4.

<sup>24</sup>MacDonald, op. cit., p. 283.

<sup>25</sup>Koechling, op. cit., p. 4.

<sup>26</sup>MacDonald, op. cit., p. 283.

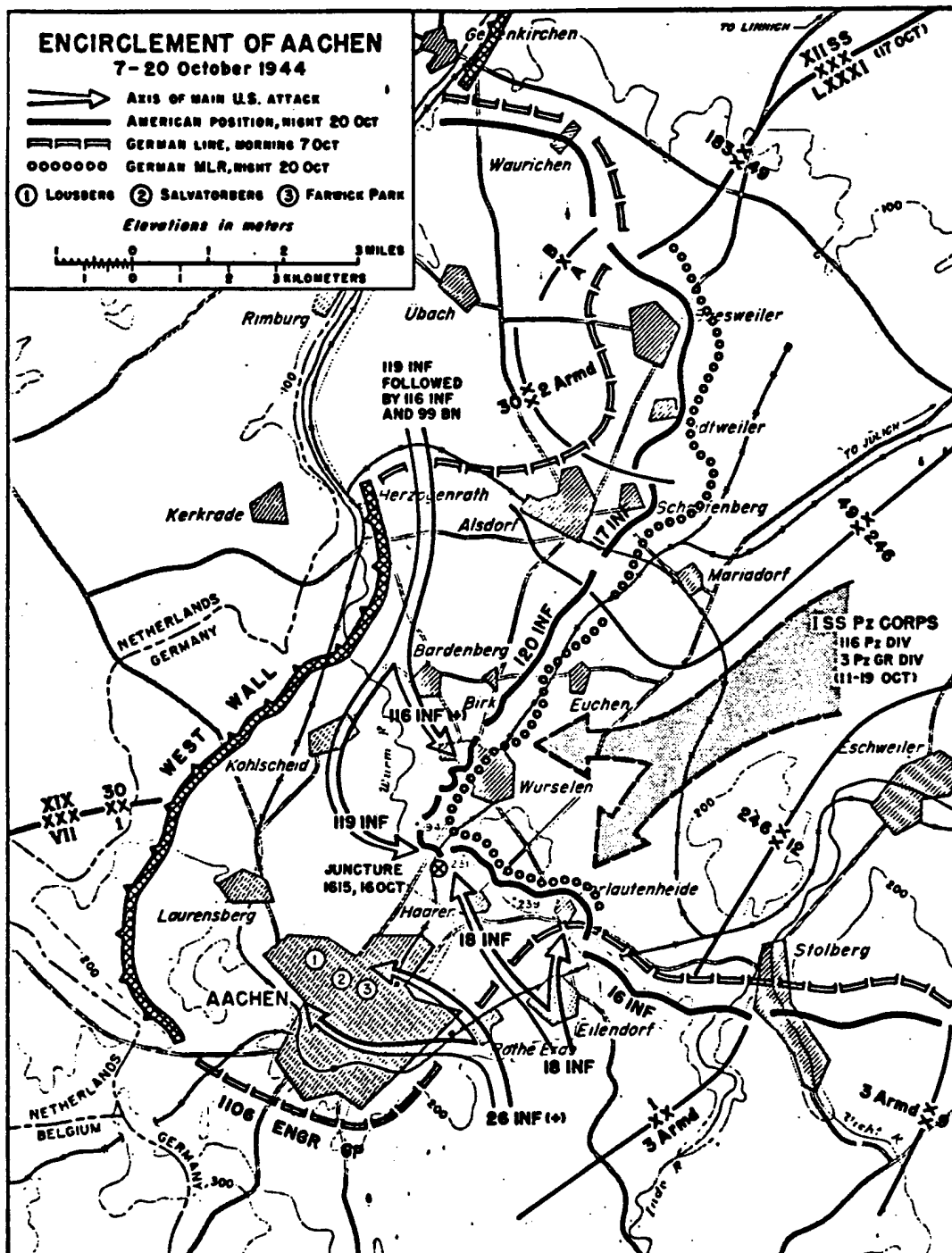


Plate III Aachen: Late Phase

the northern portion of the sector. It had no division in reserve and although he drew heavily upon the 246th and 12th Infantry Divisions in the less actively engaged southern zone, General Koechling could not supply enough combat power to stem the advance. His piecemeal commitment of extra-divisional units was hampered by American domination of the air which made even short movements extremely difficult. American artillery, which attacked reinforcements as they moved behind the lines, and the control difficulties inherent in the coordination of heterogeneous units also contributed to his problem.<sup>27</sup> His most successful attempts resulted in an effective massing of artillery against the American penetrations.<sup>28</sup>

On 8 October the southern region became active as the Americans near Eilendorf attacked to the northwest. Their objectives were the town of Verlautenheide and Hills 239 and 231. Of the three, Hill 231 was the most distant, two and a half miles from the line of departure. By 9 October all objectives were in American hands and the gap in the ring about Aachen had been closed to about three miles.<sup>29</sup>

The seizure of Hill 231 was of grave concern to the Germans. Although reinforcements from theater reserve had been on the way for some time, it was on the day following its capture that their commitment, under I SS Panzer Corps,

---

<sup>27</sup>Ibid., p. 274.

<sup>28</sup>Ibid., p. 276.

<sup>29</sup>Ibid., p. 286.



was authorized. Under guidance issued at the time, the reinforcements, which consisted of the 3d Panzer Grenadier Division and a rejuvenated 116th Panzer Division, were not to be committed until they could be used in a coordinated attack. But on the same day as the guidance was issued, it was nullified by the commander of Army Group B, General-feldmarschall Walter Model. General Model, whose command included Seventh Army and thus LXXXI Corps, feared that encirclement and reduction of Aachen would occur before all of the reinforcements arrived. He therefore authorized separate employment of elements of the 116th Panzer Division against the U.S. forces threatening to seal the Aachen corridor.<sup>30</sup> While the first such commitment was made against the drive from the north, the largest single counterattack was made by the 3d Panzer Grenadier Division against the Americans in the vicinity of Verlautenheide.<sup>31</sup> This stroke came on 15 October. It failed. A second attack, the next morning, was also unsuccessful and the division withdrew at nightfall. A third attack, this time against Hill 231, was made on 18 October. Though the attacking forces drove the Americans from the hill, a counterattack restored their positions. Again the division was withdrawn. A major, coordinated counterattack to save Aachen was never delivered.<sup>32</sup>

---

<sup>30</sup>Ibid., p. 289.

<sup>31</sup>Ibid., p. 290.

<sup>32</sup>Walter Denkert, "The 3 Panzer Grenadier Division in the Battle of Aachen (October 1944)." Heidelberg: Historical Division, United States Army, Europe, n.d., pp. 1-9.

From 8 October through 16 October the Germans' main efforts were devoted to the prevention of the encirclement of Aachen. The fruitless attacks by the 3d Panzer Grenadier Division were part of the attempt; similarly a by-regiment commitment of the 116th Panzer Division was intended to stiffen the 49th, 183d and 246th Divisions. The northern zone was made subordinate to the I SS Panzer Corps, the specially designated counterattack headquarters.<sup>33</sup> Although the identification of new units caused the Americans some apprehension and the added combat power enabled the Germans to mount some vigorous counterattacks, the Aachen gap was sealed on 16 October.<sup>34</sup>

The direct assault upon the city of Aachen had not waited for the linkup of other forces. There was no real urgency, but it was felt that an attack there would lessen the possibility of a counterattack against Verlautenheide and Hill 231.<sup>35</sup> The German forces defending the city consisted of elements of the 246th Division, already reduced in strength by levies for reinforcements for other divisions.<sup>36</sup>

On 10 October the Americans delivered an ultimatum to the military commander of the city. It was rejected. On 12 October, following intense aerial and artillery bombard-

---

<sup>33</sup>MacDonald, op. cit., p. 300.

<sup>34</sup>Ibid., p. 306.

<sup>35</sup>Ibid., p. 286.

<sup>36</sup>Ibid.

ment, the regiment selected for the assault began its attack. The commander of the 246th Division called for reinforcements and received a few, but the necessary combat power was lacking.<sup>37</sup> By 21 October the defenders of Aachen had been pushed through the city to the heights in its northwest quadrant. Resistance had diminished to uncoordinated holding engagements. Relief attempts had been abandoned. The situation had become hopeless. The commander of the 246th Division surrendered and the battle for Aachen was over.<sup>38</sup>

The battle for Aachen displayed characteristics common to the defense of many major urban population centers. It had begun as the termination of a pursuit. Forces available for the defense were weak; the number of division-sized units was misleadingly high since the divisions had been reduced in strength to regimental or battalion proportions. For example, General Schack noted that on 7 September, "The 116th Panzer Division reported that its actual strength was 18 tanks, 2 heavy antiaircraft guns, and 600 men."<sup>39</sup> While the situation improved during the battle and full strength divisions and separate units appeared, their forces soon diminished. Units were detached from their parent organizations to fill badly depleted elements elsewhere and individual replacements were slow in coming and poor in quality.

---

<sup>37</sup>Ibid., p. 312.

<sup>38</sup>Ibid., p. 316.

<sup>39</sup>Schack, op. cit., p. 8.

The planned Ardennes offensive required that replacement input be limited.

Because of the numerous small unit infantry actions, casualties were high. Because the troops were tired, or inexperienced, or concerned about affairs on the home front, their morale and combat efficiency were not always good. General Koechling summed up the personnel picture as follows:

The bloody losses on the German side have been considerable. On the major battle days they raised up to 200 men in the division (approximately 30-40 total losses, 150 wounded); the casualties by sicknesses have been very unimportant, the casualties by capture critically high often. When deducting the number of sick, so the ratio of the unfavorable number of bloody losses opposite unbloody ones (missings in action) has been a matter to think over seriously. The heaviest losses (about 75%) have been suffered by the infantry and by other arms committed within the range of the infantry battalions. The compensation of these casualties by replacements being always less trained and having less combat experience, have diminished the combat of the infantry in a critical way within the Corps in the course of the autumn.<sup>40</sup>

The status of German materiel was similar to that of personnel. There were never enough tanks and assault guns.<sup>41</sup> Fuel, ammunition and engineer construction materials were in short supply.<sup>42</sup> General Schack attributed these shortcomings to the action of Allied air forces.<sup>43</sup> General Koechling, who also complained of lack of supplies, disputed

<sup>40</sup>Koechling, op. cit., p. 35.

<sup>41</sup>Gerhard Engel, "12th Infantry Division (22 Sep - 22 Oct 44)." Heidelberg: Historical Division, United States Army, Europe, n.d., p. 27.

<sup>42</sup>Schack, op. cit., p. 17.

<sup>43</sup>Ibid., p. 22.

this, noting, "Never it has been able to interrupt the nightly supply or shifting of reserves . . ."44 German failure to stockpile supplies in the Aachen area worked hardships upon its defenders.

One resource which the Germans failed to muster effectively was the civilian population of Aachen. This sizable group had been drafted for defense purposes on 10 August. Organization was in the hands of civil and Nazi Party agencies.<sup>45</sup> Of this arrangement, Generalleutnant Paul Mahlmann, commander of the 353d Infantry Division, charged with initial occupation of the West Wall, said:

Police and party agencies, all of which had instructions not to subordinate themselves to the Wehrmacht, worked side by side with purely military organizations in preparation for the struggle to come. Thus in the municipal forest of Aachen, I encountered a police unit (probably Koeln or Duesseldorf) building there -- about 800 meters behind the West Wall -- a defensive position, independent, without adjacent supporting positions, and forming no organic part of the general defense front.<sup>46</sup>

The Germans had little idea of the control required to assure the welfare of the inhabitants and the prevention of their interference with military operations. General Schack portrayed this by saying:

When the battle for the West Wall began, no preparations had been made for the evacuation of the city of Aachen and the other towns along the wall. Evacuation was begun only after corps headquarters

<sup>44</sup>Koechling, op. cit., p. 23.

<sup>45</sup>Schack, op. cit., p. 23.

<sup>46</sup>Mahlmann, op. cit., p. 47.

had pressed the matter strongly. Then suddenly, during the night of 12-13 September, following exaggerated rumors about a penetration of enemy tanks into the West Wall area, the Party initiated a head-long evacuation and every Party agency, every member of the civil administration, and the entire police force abandoned the city, with the alleged purpose of directing the evacuation from the outside . . . . The 116 Panzer Division was ordered to assemble . . . northeast of Aachen as a Corps reserve. When the advance elements of the division reached the northeastern outskirts of the city, they found that its inhabitants had collected here awaiting evacuation although, as stated before, all the Party agencies had left. To clear the streets for the use of his troops the commanding General of the division, Generalleutnant Count von Schwerin, ordered the excited crowds to return to their homes.<sup>47</sup>

The matter of the evacuation was finally settled on 15 September when Hitler, this time through military channels, directed that civilians be removed from the city.<sup>48</sup> By 8 October fewer than 20,000 of an original population of 165,000 remained.<sup>49</sup>

The German intelligence effort was spotty. Denied aerial reconnaissance by Allied control of the air, they patrolled actively on the ground. Interrogation of prisoners provided considerable information although its reliability was frequently questionable.<sup>50</sup> The failure of the Germans to recognize the 2 October threat in the north appears to have been an error in the interpretation of available information, rather than a failure to gather it.

<sup>47</sup>Schack, op. cit., p. 23.

<sup>48</sup>MacDonald, op. cit., p. 81.

<sup>49</sup>Ibid., p. 307.

<sup>50</sup>Schack, op. cit., p. 40.

The most glaring intelligence flaw lay in the delayed receipt of data concerning the West Wall. Despite the fact that the fortifications had been built by the Germans themselves, the troops falling back to them were not fully familiar with the works they were supposed to defend. Even artillery maps were in short supply.<sup>51</sup>

The battle of Aachen was a close-in defense of a major urban population center; most of it was fought within ten miles of the city. The sector of the defending corps varied with time from twelve to seventeen miles; actions outside the corps boundaries had no appreciable effect upon the contest for the city. Besides being a defense of a center, it was a defense of the borders of Germany and a denial to an invader of the vital Ruhr industrial area. Of the city itself, General der Kavallerie Siegfried Westphal, Chief of Staff to Commander in Chief West, said:

Aachen was organically included in the defensive system of the West Wall in this sector. Therefore it had to be protected. In addition, for the German government, Aachen was the first large German city against which an Allied attack was directed. After the city was encircled on all sides it could no longer be held because of supply reasons. The relief with adequate forces had to be given up because of a deficiency of troops. However, the OKW forbade a surrender of the city.<sup>52</sup>

General Koechling felt more strongly about the continued defense of the city:

---

<sup>51</sup>Ibid., p. 21.

<sup>52</sup>Siegfried Westphal, "Answers to Questions Asked General Westphal." Heidelberg: Historical Division, United States Army, Europe, 1954, p. 3.

After the termination of the fightings later on, all the motives which could have pleaded in behalf of the continuation of the battle after the missing assaults of the 3 Pz Gren Div on the 18th October, must be considered illusory. An evacuation of Aachen and a penetration eventually to the east, should have prevented to the Corps the loss of a strong combat group.

After the effectuated surrounding, Aachen was predoomed to capture within a shorter or longer time, with a view to the total situation - such as every surrounded town not showing the character of a fortification.

Neither the General Command nor the subordinated troops could collect any comprehension for this ideology of the highest command; . . .<sup>53</sup>

General Koechling also noted that the real significance of the battle did not lie in the value of the city:

The great profit is laying less in the capture of Aachen, but herein that in the sector of the Corps the Westwall had been pierced . . .<sup>54</sup>

What could the Germans have done to improve their operations? They might have planned their original withdrawal more carefully and prepared the West Wall more adequately. They might have held the Allies west of the West Wall for a longer time and thus have gained time for its rehabilitation. They might have garrisoned the southern zone more strongly so that the initial penetration to the south and east of the city would have been prevented. They might have anticipated the 2 October push in the north and buttressed their forces against it. They might have followed through on plans for the commitment of the I SS Panzer Corps as a coordinated striking force.

---

<sup>53</sup>Koechling, op. cit., p. 14.

<sup>54</sup>Ibid., p. 36.



Had time and forces been available the Germans probably would have done most of those things. They could not plan the withdrawal more carefully because the initiative was the enemy's and the forces available were insufficient to wrest it from him. Contact between corps and larger organizations was often lost and coordination was difficult.

The German combat forces could not prepare the West Wall, nor hold the allies before it, nor man the southern sector more strongly because they did not have the personnel to do any of these things. Of the preparation of the West Wall defenses General Mahlmann said:

The Festungsdienststellen (fortress staffs), which otherwise could have taken charge of the permanent fortifications of the West Wall, had such inadequate personnel that cooperation with them was a hindrance rather than an advantage . . . . In the years when the German front was on the Atlantic and the Channel, they had become mere administrative staffs, so that no support could be expected of them.<sup>55</sup>

General Schack shed further light on the problem when he noted that "responsibility for the reorganization of the West Wall and for installing of troops in it was that of the fortified sectors."<sup>56</sup>

The German miscalculation in the north allowed the Americans to gain a toehold which later counterattacks could not dislodge. Had the 183d and 49th Divisions been reinforced prior to the attack they might have thrown it back. But the reinforcements would have come from other units in

---

<sup>55</sup>Mahlmann, op. cit., p. 45.

<sup>56</sup>Schack, op. cit., p. 18.

contact in the south; there was no reserve. When the 9 October capture of Verlautenheide and Hill 231 occurred, the Germans could not reduce the penetration; forces needed for a successful counterattack had been withdrawn for commitment in the north. Earlier withdrawal, in anticipation of a northern drive, would have created the same weakness; the Germans had no guarantee that the American objective was Aachen rather than the Ruhr.

The piecemeal commitment of the reserve failed to stop the attackers. However, what alternative existed? The forces on line were incapable of containing the thrust to the south. When the 3d Panzer Grenadier Division attacked the advanced positions at Verlautenheide and Hill 231 the gap in the Aachen ring was less than three miles wide and closing rapidly. Whether a coordinated, two division assault upon a closed ring would have been more effective than the scheme which was used cannot be determined.

The battle for Aachen showed that forces falling back upon an urban population center may be disorganized as a result of previous actions, that delay to provide time for defense preparations may be necessary, and that static, fortified lines may not stop a determined attacker. It also demonstrated the need for adequate reserves and for the ability to shift combat power to meet changing situations on the line of contact. The American encirclement tactics illustrated a prominent threat to any defense of a major urban population center. The need for effective control of the civilian population was also displayed.

## CHAPTER II

### THE BATTLE FOR BERLIN

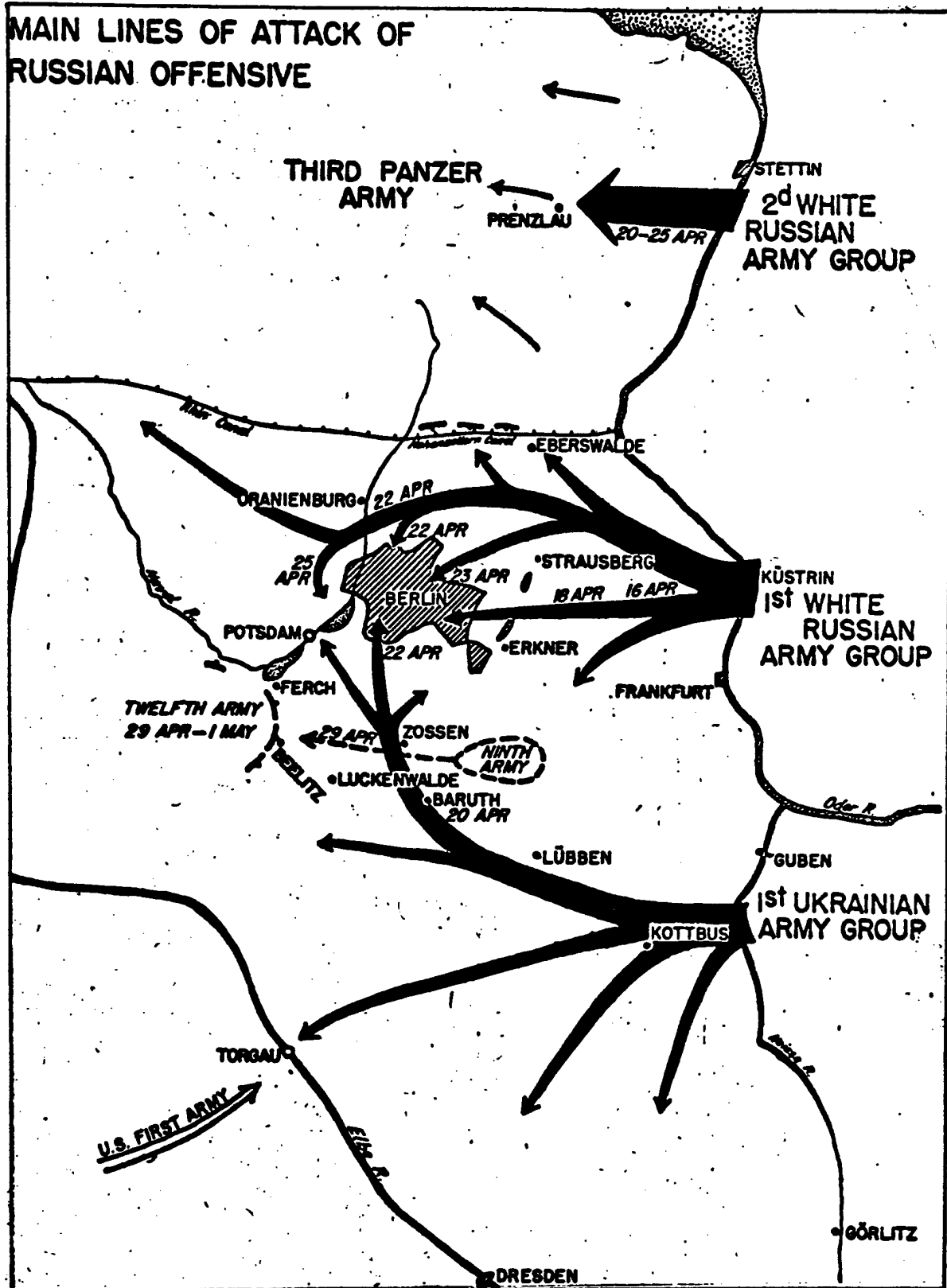
The battle for Berlin was the last major contest of the European phase of World War II. As such it exemplified the "defended city" concept of Adolf Hitler. It is included in this study because it illustrates the complex considerations involved in the defense of a very large community.

The fight for the city began after the successful Soviet push from the Vistula River to the Oder River - Niesse River line, at its nearest point about fifty miles east of the German capital. (PLATE IV) Although the Russians had thrown a bridgehead across the Oder as early as 2 February 1945, and had an army on its eastern bank by 4 February, it was not until 16 April that they made a major attempt to drive to Berlin.<sup>1</sup> On that day the Soviets attacked out of the Kustrin bridgehead, on the Oder River due east of Berlin, and across the Niesse River, in the vicinity of Forst, about sixty five miles south of Kustrin. Kustrin was in the sector of Army Group Vistula. Forst was just south of its boundary with Army Group Center.<sup>2</sup>

---

<sup>1</sup>Percy Ernst Schramm, "The German Wehrmacht in the Last Days of the War." Heidelberg: Historical Division, United States Army, Europe, n.d., Pt. II, pp. 456, 460, 474.

<sup>2</sup>Ibid., p. 574.



*Plate IV Berlin: Location and Situation*

The German forces, which had been unable to prevent the crossing of the Oder, or destroy the bridgeheads which resulted therefrom, delayed toward Berlin. Only one significant combat element, LVI Panzer Corps, actually retired to the city.

By 22 April, Russian forces from the Kustrin crossing had reached the northeastern periphery of the city.<sup>3</sup> By 24 April the capital was surrounded.<sup>4</sup> The Russians had penetrated a number of hastily established lines and the forward defense position of the city itself.<sup>5</sup>

Berlin's protective structure (PLATE V) comprised a forward position, a perimeter position, an inner ring based on a railroad circuit in the city and a hard core zone in the heart of the inner ring. The forward position was linear. It was set in good defensible terrain afforded by a chain of lakes that is located seven miles to the east of Berlin. Despite its natural strength the forward defense position did not delay the Red Army for very long. Lack of trained troops and disorganization contributed to its early failure.<sup>6</sup>

The two defense rings for the city proper were based for the most part on minor obstacles, either natural or man-made. The outer of the two followed the edge of the city.

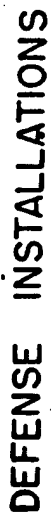
---

<sup>3</sup>W. E. D. Allen and Paul Muratoff, The Russian Campaigns of 1944-45. (Harmondsworth, Middlesex, England: Penguin Books, 1946), p. 326.

<sup>4</sup>Wilhelm Willemer, "The German Defense of Berlin." Heidelberg: Historical Division, United States Army, Europe, 1953, p. 58.

<sup>5</sup>Ibid., p. 28.

<sup>6</sup>Ibid.



Sixty nine miles in total length, it consisted of partially completed field fortifications and roadblocks intended to block avenues of approach into the city. The inner ring followed an intraurban railroad which traced a roughly circular course about six miles in diameter around the center of Berlin. The location of a line there took advantage of the coherence provided by a continuous, easily distinguished terrain feature. The line, like the outer one, consisted of field works and roadblocks. It had not reached the level of completion of its counterpart by the time the attack began.<sup>7</sup> Neither ring provided much depth of prepared positions.

The defense zone in the center of the city was an oval region about five miles long and two wide. It contained the majority of important public buildings and its defense was to be based upon the value of these structures as individual strongpoints.<sup>8</sup>

Soviet forces which had reached the outer perimeter by 22 April pierced it and drove to the northeast edge of the inner ring by 23 April. Other Red units, attacking further south, also broke the outer band and advanced to the Telow Canal, an important obstacle in the southern sector. The LVI Panzer Corps, until then in positions to the southeast, withdrew to the city.<sup>9</sup>

On 24 April the final defense of Berlin began. With

---

<sup>7</sup>Ibid., pp. 28, 31.

<sup>8</sup>Ibid., p. 26.

<sup>9</sup>Ibid., p. 58.

four regular divisions on line, in addition to militia, naval, air and SS troops, the Germans sought to protect the inner ring and the central defense zone.<sup>10</sup> They also tried to relieve the city by attacking the Russians on their northern and southern flanks. On 24 April a division size task force from the Third Panzer Army sector struck the Soviets near Oranienburg, about eighteen miles north of Berlin. Although intended only to block further Russian penetrations to the west, the initial success of the attack gave rise to hopes of a continuing movement into Berlin from the north. Before that effort could get underway, the Russians still further to the north threatened the Third Army so severely that it withdrew to the west, taking the task force with it and ending relief efforts in its sector.<sup>11</sup>

To the south of Berlin two major organizations remained which might have relieved the city. These were the Ninth Army, which had held fast at the Oder and had become encircled southeast of the German capital, and the Twelfth Army, which faced the Americans on the Elbe River, about seventy five miles to the southwest of Berlin. Hitler, who was in personal charge of the defense, directed the Ninth Army to break out of the Red trap in a northwesterly direction, join forces with Twelfth Army which was to attack to the east, and relieve the city. Ninth Army, despite Hitler's order, attacked due west. Although it made contact with the

---

<sup>10</sup>Ibid.

<sup>11</sup>Ibid., p. 61.



Twelfth Army on 29 April, neither it nor the Twelfth Army drove toward Berlin. Twelfth Army, after facing about at the Elbe, had moved eastward to within twenty three miles of the city. After its juncture with the Ninth Army, however, it withdrew to the Elbe where it was captured by the Americans.<sup>12</sup>

The battle within the city continued from 24 April through 2 May. The pattern of conflict in the various parts of the city depended upon the nature of the troops there. Where regular units or SS organizations were involved, the Russians had great difficulty in advancing. Where other types of defenders were present they made rapid headway.<sup>13</sup> By 30 April the Germans held a dumbbell shaped region, one portion of which comprised part of the original inner defense zone and the other an area in the less heavily attacked western portion of the city. A tenuous communications line between the two sectors existed, based upon use of a subway tunnel which connected them. The total area of the German held territory was then about four and one half square miles.<sup>14</sup> On 30 April the German military commander issued an order to his troops which permitted their withdrawal from the city on their own initiative. This order was almost immediately revoked, but on the following day it was supplanted by directives to break out of Berlin.

---

<sup>12</sup>Ibid., p. 62.

<sup>13</sup>Ibid., p. 46.

<sup>14</sup>Ibid., p. 59, Sketch 8.

Although this second order was also countermanded, some units did force their way out to the west.<sup>15</sup>

On the morning of 2 May the city of Berlin surrendered.<sup>16</sup> The fragmented command, with its ineffective communication system could not bring about an immediate end to hostilities, however, and some fighting did occur after the formal capitulation.<sup>17</sup>

The battle for Berlin was waged, on the German side, by forces which were tired of fighting or which had had little training or combat experience. By 31 January 1945, even before the battle had begun, the German estimate of losses sustained was 1,810,061 killed, 4,429,875 wounded and 1,902,704 missing.<sup>18</sup> The effects of these losses were felt in the number and nature of the divisions fighting on the eastern front. Extracts from the German War Diary illustrate this clearly.

Transfer of troops to the East (12 January-1 March): It was planned that 42 division-size units (Verbaende) were to be transferred by 1 March. Three more were to be transferred after 1 March. By 12 February the following units had been transferred.

2. From Twentieth Army (Norway): 163d, 169th, and 199th Infantry Divisions.
3. From Navy High Command (North Sea Coast): 1st Naval District (formerly the Naval Infantry Division).
4. From the SS Main Security Office: 18th Panzer-

<sup>15</sup>Ibid., p. 64.

<sup>16</sup>Andrew Tully, Berlin: Story of a Battle. (New York: Simon and Schuster, 1963), p. 289.

<sup>17</sup>Willemer, op. cit., p. 64.

<sup>18</sup>Schramm, op. cit., p. 660.

grenadier Division, SS Division "30 January", 31st SS Volunteer Infantry Division, 37th SS Cavalry Division, the latter unit to Army Group South.

5. From the Replacement Training Army: Divisions "Kurmark", "Doeberitz", and "Berlin", Panzer Divisions "Jueterbog" and "Silesia", 275th Infantry Division.<sup>19</sup>

Morale of the forces was not high. Reports of misbehavior of the troops run through the accounts of the late battles on the eastern front. The War Diary noted that on 5 February "the number of deserters from units fighting north of Posen had increased under the influence of enemy propaganda."<sup>20</sup>

The forces which were to defend Berlin had deteriorated even beyond the conditions illustrated above. In his definitive study of the defense of Berlin, Colonel Wilhelm Willemer of the German Army stated:

In addition to permanent local troops and the LVI Panzer Corps, a number of improvised forces and alert units were organized in Berlin proper. Units were also poured into Berlin at the last minute by Army, Luftwaffe, Navy, Party, SS, Police, and Labor Service. These troops were carried in by train, motor vehicle, transport plane, or moved in on foot. Some forces either did not reach Berlin or else arrived only in small numbers. Others passed through the city on their way to the forward defense position, while still others remained outside the city and were later forced to withdraw. Many groups moved quietly out of Berlin to the west. In addition to the divisions of the LVI Panzer Corps, remnants of other front-line units were swept into Berlin.<sup>21</sup>

The component of the local defense force which was numerically strongest was the Volkssturm. Composed of older

<sup>19</sup>Ibid., p. 514.

<sup>20</sup>Ibid., p. 486.

<sup>21</sup>Willemer, op. cit., p. 39.

men judged capable of bearing arms only in an emergency, it numbered 60,000. The Volkssturm was a militia, organized on a local basis, trained in the evenings and on weekends, and equipped with light infantry weapons. It had neither communications nor cooking equipment. While some of the Volkssturm units fought with skill and courage, most of them were unequal to the task of holding off the Red Army.<sup>22</sup> An example of the behavior of the militia may be found in a report of the commander of a composite battalion assigned to the defense of the outer perimeter:

. . . The battalion was composed of construction and Volkssturm troops, none of whom had had combat experience. They were armed with captured rifles and a few machine guns, and had only a limited supply of ammunition . . . . On the evening of the first day of battle all of the Volkssturm troops deserted, and the gap was filled only by recruiting stragglers.<sup>23</sup>

Other local defense forces were almost as bad. These included army and Luftwaffe personnel, hastily assembled and lightly armed, who had been recruited and organized from schools, staffs and hospitals in the Berlin area or who had been furnished as replacements for Army Group Vistula. Many of the local forces had been thrown into the battle at the Oder and had been lost to the city itself. Others disintegrated under pressure and their members became part of the body of deserters who were in, but did not defend, the capital.<sup>24</sup>

---

<sup>22</sup>Ibid., p. 42.

<sup>23</sup>Ibid., p. 31.

<sup>24</sup>Ibid., p. 42.

The local, permanently organized troop units included some artillery and antiaircraft. The artillery was made up of poorly trained officers and soldiers of all branches of the service. They were so poorly prepared for combat that "the first firing of live ammunition . . . was discontinued because it endangered the observation post."<sup>25</sup>

The antiaircraft units were better trained for their primary role, but lacked skill in employment in the ground mode. When employed against the Russians their effectiveness was uneven. Some units presented a determined defense while others were quickly overrun.<sup>26</sup>

Two organizations provided the backbone of resistance in Berlin. These were the Waffen SS Brigade and the LVI Panzer Corps. The former was commanded by SS Brigadefuehrer Mohnke. Its several thousand men were assigned to the inner defense zone where they fought with competence and tenacity.<sup>27</sup>

The LVI Panzer Corps, commanded by General der Artillerie Weidling, consisted of the 20th Panzer Grenadier Division, Panzer Division "Muencheberg", the 18th Panzer Grenadier Division, SS Panzer Grenadier Division "Norland", the 408th Volks Artillerie Corps, and remnants of the 9th Parachute Division and SS Panzer Grenadier Division "Nederland".<sup>28</sup>

---

<sup>25</sup>Ibid., p. 43.

<sup>26</sup>Ibid., p. 44.

<sup>27</sup>Ibid., pp. 43, 64.

<sup>28</sup>Ibid., p. 45.

All of the units had been involved in the battle at or the withdrawal from the Oder and all had been severely damaged by those previous engagements.

Commenting about the total combat power available for the defense of Berlin, Colonel Willemer said:

Numerically, a rough survey of all troops available after the encirclement of the city gives the following picture: The LVI Panzer Corps was equal to about two divisions, the Waffen SS forces to about half a division, and all other forces in the city to from two to three divisions, a total of about four to five divisions.

The city contained an estimated 60,000 soldiers and from fifty to sixty tanks.<sup>29</sup>

Colonel Willemer's figures did not include non-effective military personnel, such as deserters, nor forces which had been destroyed prior to the encirclement.

The combat intelligence required for the defense of Berlin must have suffered from the paucity of experienced personnel and the lack of communications equipment. Elements which resisted strongly were often outflanked by the attackers. Whether this occurred through lack of knowledge of the enemy's location cannot be determined.

In a broader sense, the weakness of the defense of Berlin might be laid in part to a faulty appraisal of enemy intentions. When Army Group Vistula was formed on 21 January 1945, its primary mission was "to prevent a break-through towards Danzig and Posen cutting off East Prussia."<sup>30</sup> As late as 7 February the Wehrmacht estimated that "the attack

---

<sup>29</sup>Ibid., p. 46.

<sup>30</sup>Schramm, op. cit., p. 429.

would probably be directed towards a point south of Berlin, while a secondary thrust would be aimed at Dresden."<sup>31</sup> It was not until 17 February that the Germans felt that "as soon as forces could be released from Breslau and success had been gained in eastern Pomerania, the enemy was expected to attack Berlin from the area Frankfort-Frieswalde."<sup>32</sup> By the time this determination had been made the forces which might have been reserved for the defense had been committed elsewhere.

The logistic situation in Berlin reflected the difficult straits to which the nation had been reduced. When, in early February, it was decided to erect fortifications around the city, it was found that mines and barbed wire were in short supply. There were insufficient hand tools; construction workers had to provide their own. Fuel was so scarce that the use of power shovels for construction had to be abandoned.<sup>33</sup>

The light weapons which had been provided to the local defense forces were insufficient in quantity and of varying makes and models. Ammunition for them was difficult to obtain.<sup>34</sup> Even regular forces suffered from shortages of arms and ammunition. When the new artillery commander for Berlin

---

<sup>31</sup>Ibid., p. 469.

<sup>32</sup>Ibid., p. 490.

<sup>33</sup>Willemer, op. cit., p. 27.

<sup>34</sup>Ibid., pp. 41, 49.

took charge in March, he found that his command consisted of only fourteen batteries and that "all of the guns were of foreign manufacture."<sup>35</sup> The 408th Volks Artillerie Corps, which entered the city with the LVI Panzer Corps, was equipped in part with 152 mm Russian guns.<sup>36</sup>

Part of the ammunition shortage was caused by the variety of weapons requiring support. A lack of organization also provided a reason for scarcity. Although three well stocked depots had been set up, the commander of the artillery was unaware of their existence and could not, therefore, draw from the stocks which were available to him.<sup>37</sup>

Food and water posed no extensive problem. Depots stocked with provisions were located throughout the city. Unless administrative restrictions interfered, the troops could draw sufficient rations for their needs. When the public water supply system failed, wells and watercourses provided ample supplies of water.<sup>38</sup>

Fortification construction was hindered by lack of personnel as well as tools and material. Because most of the able-bodied labor force held jobs in war plants, only about 70,000 laborers could be employed in the erection of military works. The short time available and the shortage of material forbade the construction of concrete bunkers;

---

<sup>35</sup>Ibid., p. 43.

<sup>36</sup>Ibid.

<sup>37</sup>Ibid., p. 48.

<sup>38</sup>Ibid., p. 49.



trenches, dugouts, and earthwork obstacles had to suffice. So poorly organized was the construction effort that the War Diary for 28 February noted "all road barriers and other obstacles erected around Berlin by local commands or by the Party were to be removed, since they endangered and hindered traffic."<sup>39</sup>

Demolitions were planned both for the creation of obstacles and for the denial to the Russians of worthwhile industrial facilities. Despite strong military arguments for the destruction of all bridges, it was decided that some of the structures, particularly those carrying water and sewage mains, would be spared. Of the 248 bridges in the city 129 were destroyed or damaged.<sup>40</sup> Similarly, at least some supply installations needed by the population were left undamaged.<sup>41</sup>

The attitude of the national regime toward the people of Berlin is best summed up by Colonel Willemer, who said:

An evacuation of the population in anticipation of the defense and possible encirclement of the city was never considered. People were encouraged to stay where they were, since it would have been impossible to assemble everybody in a safe place. On the other hand, those who wished to leave of their own accord were free to do so, provided they were not bound by duties in offices or factories or with the Volkssturm. Thus the number of inhabitants at the time of the encirclement of the city may have totaled between 3 and 3.5 million.<sup>42</sup>

<sup>39</sup>Schramm, op. cit., p. 506.

<sup>40</sup>Willemer, op. cit., p. 34.

<sup>41</sup>Ibid., p. 37.

<sup>42</sup>Ibid., p. 50.

Food depots had been set up to assure sustenance for the civilians. Some advance rations may have been issued, although the extent to which this was done is not known. In his book, "Berlin: Story of a Battle", Andrew Tully presents extracts from the diary of an apartment house concierge, Willy Luedicke:

A horse was killed by a bomb in the Nurnberger Strasse, and a soldier quickly skinned it. Later I discovered my nephew was missing from the shelter, although I had strictly forbidden him to leave. In about an hour's time he returned with five or six pounds of horse meat . . . . Our supply of food was not too small, but you never know how soon the shops will open again.<sup>43</sup>

While the welfare of the civilian population was a matter of concern to the responsible members of the military, certain uncontrolled elements did prey upon it. Notable among these were fanatical bands of SS<sup>44</sup> and the unknown agency which demolished subway tunnels which were being used as shelters.<sup>45</sup>

The battle for Berlin was incredible in many respects. Despite its importance as the capital of Germany, the defense of Berlin was never covered by a complete, formal defense plan.<sup>46</sup> On 2 February 1945 Berlin was designated as a tactical area. A Berlin Defense Area was established, under the command of Generalleutnant Ritter von Hauenschild. General von Hauenschild was directly subordinate to Hitler;

---

<sup>43</sup>Tully, op. cit., p. 141.

<sup>44</sup>Ibid., p. 162.

<sup>45</sup>Willemer, op. cit., p. 34.

<sup>46</sup>Ibid., p. ii.

he attended the daily situation conferences at the Fuehrer's headquarters.<sup>47</sup> Despite this access to the fountainhead of German national direction the commander in Berlin could get no guidance concerning the number and composition of forces upon which to base a defense plan. General von Hauenschild was soon succeeded in command by Generalleutnant a. D. Reymann, under whose energetic leadership the physical preparations for the defense of the city went forward as rapidly as possible. But General Reymann could learn no more than his predecessor about who was to be available to man the fortifications.<sup>48</sup> In early April the commander of Army Group Vistula recognized the possibility of his ultimate involvement in Berlin. He was told that defense plans based on the failure of the Oder River line called for the establishment of a new defense area bounded by the Oder on the east, the Hohenzollern and Rhin Canals on the south, and the Elbe on the west. The zone did not include Berlin; the army group had neither to include the city in its defense plans nor provide troops for its protection.<sup>49</sup> So it was that on 19 April, when the Berlin Defense Area was made subordinate to Army Group Vistula, the latter organization had no real plan for the defense of the city. Further, in anticipation of the ultimate withdrawal to the new, northern defense area, the group commander, Generaloberst Heinrici, had

---

<sup>47</sup>Schramm, op. cit., p. 456.

<sup>48</sup>Willemer, op. cit., p. 8.

<sup>49</sup>Ibid.

directed that the trains of the Ninth Army be withdrawn to the northwest, that group reserves be positioned to assist Ninth Army's withdrawal across the canals and that available combat forces in Berlin be displaced east of the city to assure that the Russians were engaged there instead of in the capital itself.<sup>50</sup>

Army Group Vistula did everything possible to avoid conflict in Berlin. Hitler had other plans. On 22 April he assumed command of the defense. On the following day he ordered the LVI Panzer Corps to Berlin. He neither consulted nor informed the commanders of Army Group Vistula or Ninth Army to which the corps was subordinate. Although the corps commander first followed the direction of Ninth Army to displace elsewhere, he finally responded to Hitler's decree and closed on the German capital.<sup>51</sup>

While the instance given above was the most startling example of Hitler's direct intervention in the campaign, other similar actions took place. It was Hitler who directed Ninth Army to hold fast at the Oder after other elements had been driven well away from that obstacle. And it was Hitler who ordered the abortive relief attempts of the 24th of April.<sup>52</sup>

Worse perhaps than his direct intervention, was his manipulation of the organization of the Wehrmacht and Army

---

<sup>50</sup>Ibid., pp. 10-11.

<sup>51</sup>Ibid.

<sup>52</sup>Ibid.

High Command. By the time of the Berlin defense, the German command structure had deteriorated significantly. Describing the difficulties that this imposed upon the keeper of the Wehrmacht War Diary, Professor Dr. Percy Ernst Schramm said:

The Army General Staff, which commanded the Eastern Front, was immediately subordinate to Hitler as Commander in Chief of the Army in the same manner as the chief of the Wehrmacht Operations Staff was subordinate to the Fuehrer as Commander in Chief of the Wehrmacht. Since Field Marshal Keitel concerned himself with the duties of a war minister rather than operational matters, the Wehrmacht High Command's operational advisor to Hitler was Generalleutnant Jodl. This arrangement resulted in continued antagonism between the Wehrmacht Operations Staff under Jodl and the Army General Staff, which had been under Generaloberst Guderian from mid-1944, and under Generaloberst Krebs after March 1945.

Because of this antagonism, the Wehrmacht Operations Staff, although daily informed about the situation in the East, received no detailed estimate of the situation, and no reports on measures taken or plans for the future. On all of these matters its information was general only. Nor did the operations staff receive copies of orders, messages, situation estimates, or similar material.<sup>53</sup>

The same kind of command discord was engendered between all levels of military and civilian agencies. The Wehrmacht and the Nazi Party were mutually antagonistic. The Todt Organization and the Reich Labor Service cooperated with the military only grudgingly. Volkssturm personnel were subordinate to the military only during battle. Colonel Willemer ascribes this state of affairs to Hitler's mistrust of his subordinates and his desire to divide their authority and thus strengthen his own.<sup>54</sup> Regardless of the reasons for

---

<sup>53</sup>Schramm, op. cit., p. 396.

<sup>54</sup>Willemer, op. cit., pp. 13, 23.

it, division of command did exist in Berlin and did materially retard efforts to defend the city.

Operationally, the forces within the city conducted their defense in a wholly orthodox manner. The regular forces were committed in the most dangerous sector, the east. They fell back upon the strongest defense area and made good use of both strong-points and rubble generated by the battle. The regular troops and the highly disciplined SS performed creditably in the small unit actions which took place. Less experienced units did not fare so well. Since forces were insufficient to man the perimeter of the city, the attackers quickly gained footholds in the built-up areas and developed covered bases from which to launch further methodical attacks by infiltration or direct assault. The defenders had neither the strength nor the organization to cope with this technique.<sup>55</sup>

The battle for Berlin was pointless and although the German forces were not large, their dissipation in a hopeless struggle was a waste of the dwindling resources of the nation. From the battle itself it may be concluded that a major urban population center constitutes a formidable obstacle even when virtually unimproved with defensive works; that its defense requires sizable, well trained forces; that military decisions concerning the defense will be influenced by the presence of its substantial population; and that detailed planning and simple organization are required for effective

---

<sup>55</sup>Ibid., p. 59.

conduct of operations. The military value of a major urban population center was shown to be only one of the factors upon which the decision to defend may be based.

## CHAPTER III

### THE BATTLES FOR THE BRITTANY FORTRESSES

A study of the Brittany Fortresses provides a unique opportunity to examine the fortress concept in preparation and operation. In Brittany the attacker's two possible courses of action, reduction and containment, were illustrated and the fortresses' responses to them were demonstrated. The Brittany Fortress complex was an entity; preparations and conditions within the individual fortresses were all essentially the same.

The battles for the Brittany Fortresses began on 31 July 1944. On that date American forces secured the French town of Avranches, located in the extreme northeast corner of the Brittany Peninsula, and a communications key to operations in it.<sup>1</sup> When the Americans began an armored drive into the peninsula the next day, the German order of battle showed that three corps, the XXV, LXXX and LXXXIV, had some territorial responsibility there.<sup>2</sup> Later events diverted

---

<sup>1</sup>Martin Blumenson, United States Army in World War II: European Theater of Operations: Breakout and Pursuit. (Washington: Office, Chief of Military History, Department of the Army, 1961), p. 31.

<sup>2</sup>Wilhelm Fahrmbacher, "Background and Development of the Atlantic Wall in the Brittany Area." Heidelberg: Historical Division, United States Army, Europe, n.d., Appendix 20.



the attention of the latter two organizations, however, and the defense of the Brittany area ultimately fell to the XXV Corps alone.<sup>3</sup>

While most of the coast of Brittany was fortified, certain ports had been designated "fortresses" and special attention had been paid to their development as military bastions. These ports, deemed important to the German submarine effort or of possible value to the Allies, were Brest, Lorient, St. Malo, and St. Nazaire.<sup>4</sup> (PLATE VI) The concept of "fortresses" called for a defensive technique whereby the forces in Brittany were to withstand invasion if possible, but, if necessary could withdraw to heavily fortified havens from which to continue local protection of key points. At first partially manned by low caliber, static forces, the fortresses would ultimately depend upon withdrawing units for their defense.<sup>5</sup>

The American offensive, which began on 1 August, originally sought to cut off Brittany by striking from Avranches through Rennes to Quiberon Bay, on the southern coast about one hundred miles away. Having isolated the area, the Americans were then to clear the rest of Brittany by securing the central plateau and, later, by reduction of German forces remaining in the port cities. Operating under this

---

<sup>3</sup>Blumenson, op. cit., p. 342.

<sup>4</sup>Fahrmbacher, op. cit., p. 3.

<sup>5</sup>Hans Speidel, Invasion 1944. (Chicago: Henry Regnery Company, 1950), p. 132.

# UT INTO BRITANNY 1-12 August 1944

ARROWS INDICATE ROUTES OF ADVANCE  
POSITIONS LETTERS A, B, AND R AFTER  
COMBAT COMMANDS.  
INDICATES AREAS HELD BY GERMAN FORCES  
UP TO PORT CITIES ON 12 AUGUST.

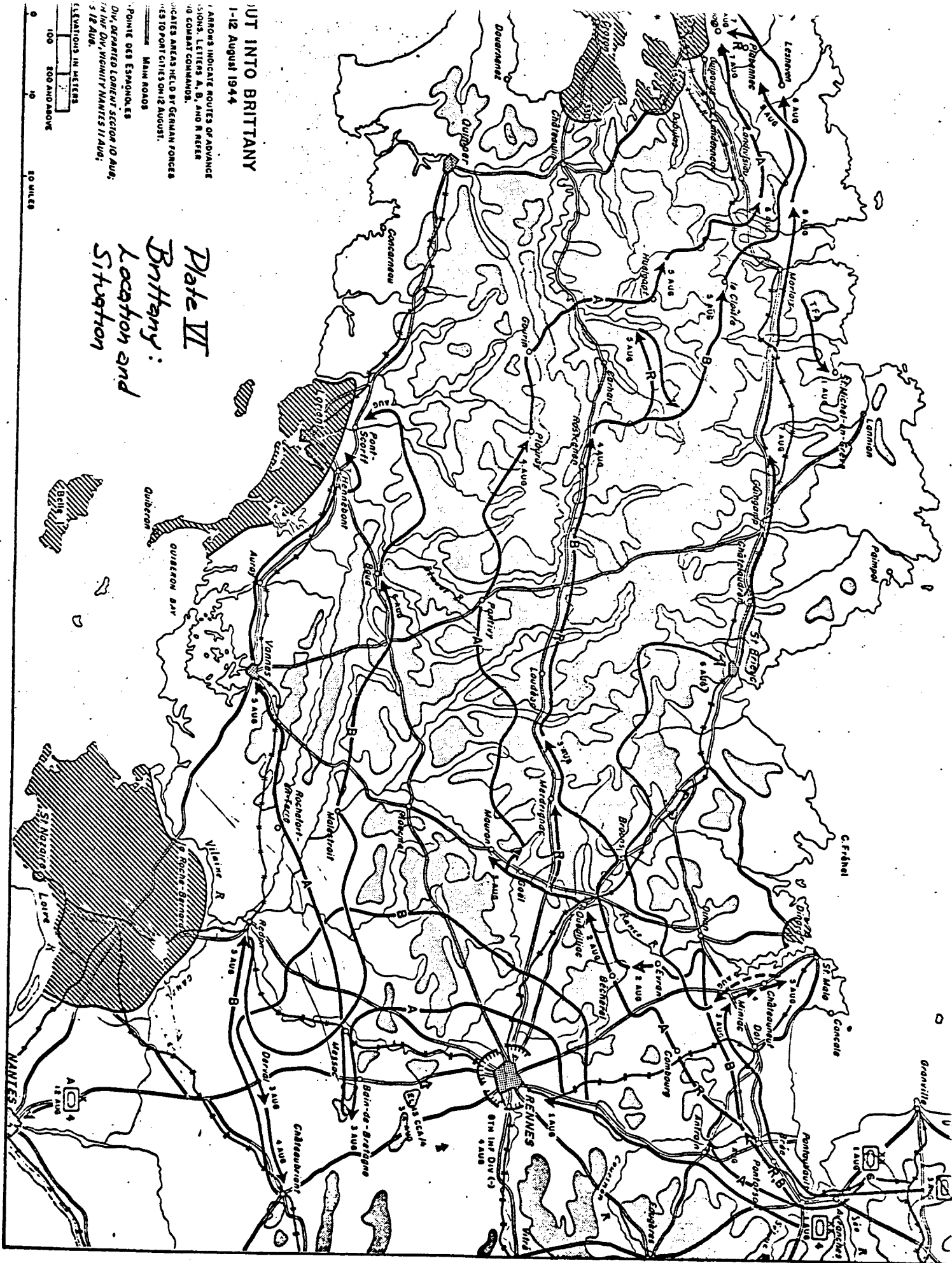
MAIN ROADS

POINTS DES ESPRONS, ES  
DIV. DEPARTED LORENT SECTION 10 AUG;  
IN INF DIV, VINCINITY NANTES 11 AUG;  
3 12 AUG.

ELEVATIONS IN METERS  
100 200 AND ABOVE

0 10 20 MILES

## Plate VI Brittany: Location and Situation



concept, the attackers fanned out quickly and were in the vicinity of St. Malo and St. Nazaire by 5 August and Brest and Lorient by 7 August.<sup>6</sup> The Americans accomplished this by rapid maneuver of armored columns which avoided engagements with pockets of determined resistance. The Germans, though disorganized and segmented, were not cleared from the peninsula.<sup>7</sup>

For the defenders of the fortresses, the withdrawal, first into Brittany and then into the havens, had gone essentially according to plan. The first test of the soundness of the fortress scheme came at St. Malo. (PLATE VII) Here a heterogeneous mixture of alarm and combat troops,<sup>8</sup> numbering twelve thousand and including remnants of the 77th Infantry Division,<sup>9</sup> held inner and outer rings of prepared defenses.<sup>10</sup> The inner perimeter was a rough semicircle about ten miles long which faced southeast and was located about two and one half miles from the center of the port. It bounded a zone of strongpoints which extended throughout the St. Malo area. The inner defense area included the city of St. Malo and the suburbs of Parame, St. Sevard and, west of the Rance River, Dinard.

---

<sup>6</sup>Blumenson, op. cit., p. 384.

<sup>7</sup>Joseph M. Kirchheimer, "Observer Report, ETO, 11 August-1 October 1944." Washington: Headquarters Army Ground Forces, Army War College, 1944, p. 7.

<sup>8</sup>Fahrmbacher, op. cit., p. 57.

<sup>9</sup>Blumenson, op. cit., p. 395.

<sup>10</sup>After Action Report, 83d Infantry Division, August 1944, p. 5.

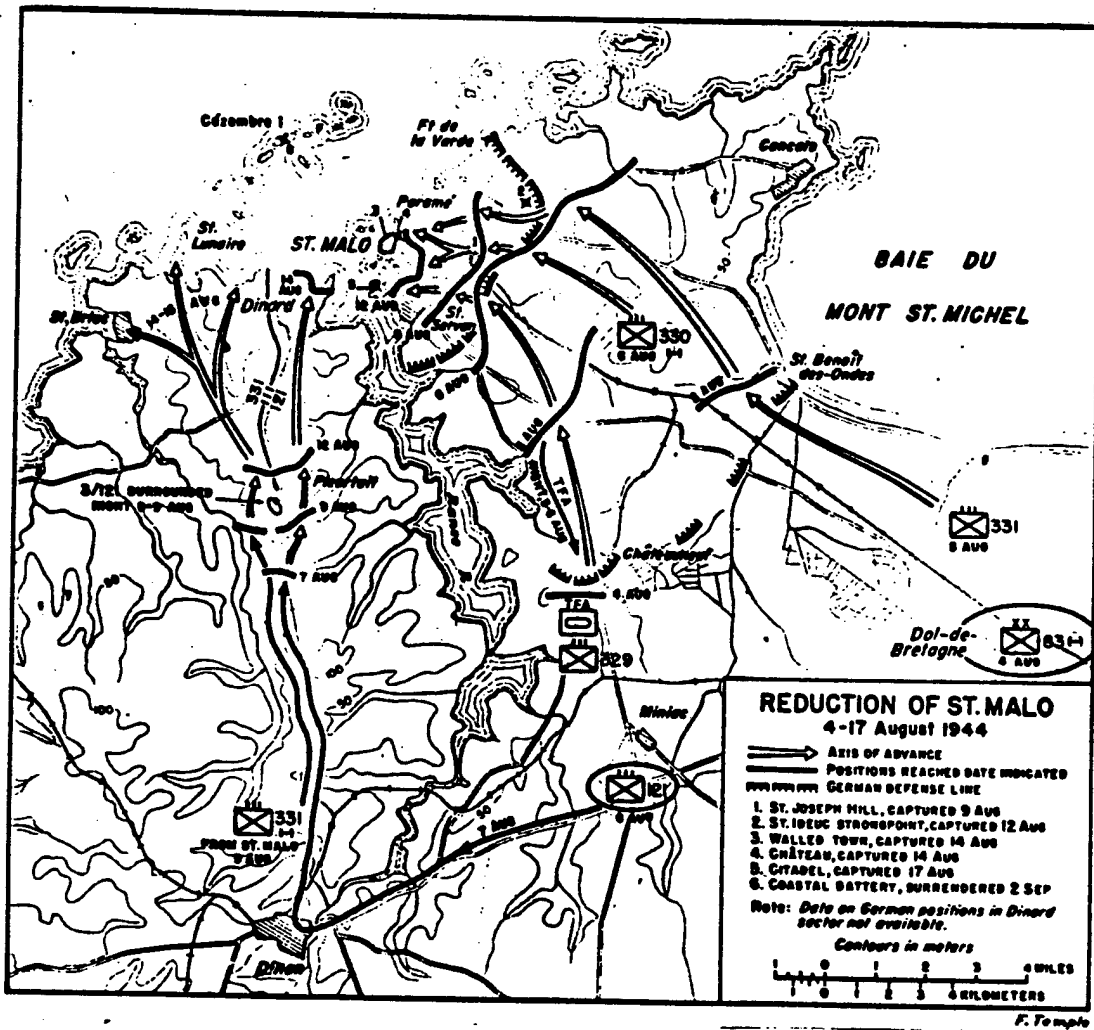


PLATE VII Brittany: St. Malo Defenses

The outer perimeter was a series of strongpoints concentrically positioned six miles beyond the inner ring.<sup>11</sup> The Americans attacked in division strength on 5 August and, after overcoming moderate resistance, pierced it. Passing through two gaps southeast of St. Malo, the attackers reached the inner defense perimeter by noon of the following day. From 6 August until 14 August three infantry regiments moved slowly through the defense belt, encountering heavy fire from specially constructed fortifications and well developed strongpoints in prominent buildings. While most of the city and surrounding villages had been cleared by 15 August, a center of resistance remained in German hands. This was a citadel of ancient construction on a promontory opposite the city of St. Malo. Thoroughly modernized and equipped to withstand both bombardment and siege, it held out until 17 August.<sup>12</sup>

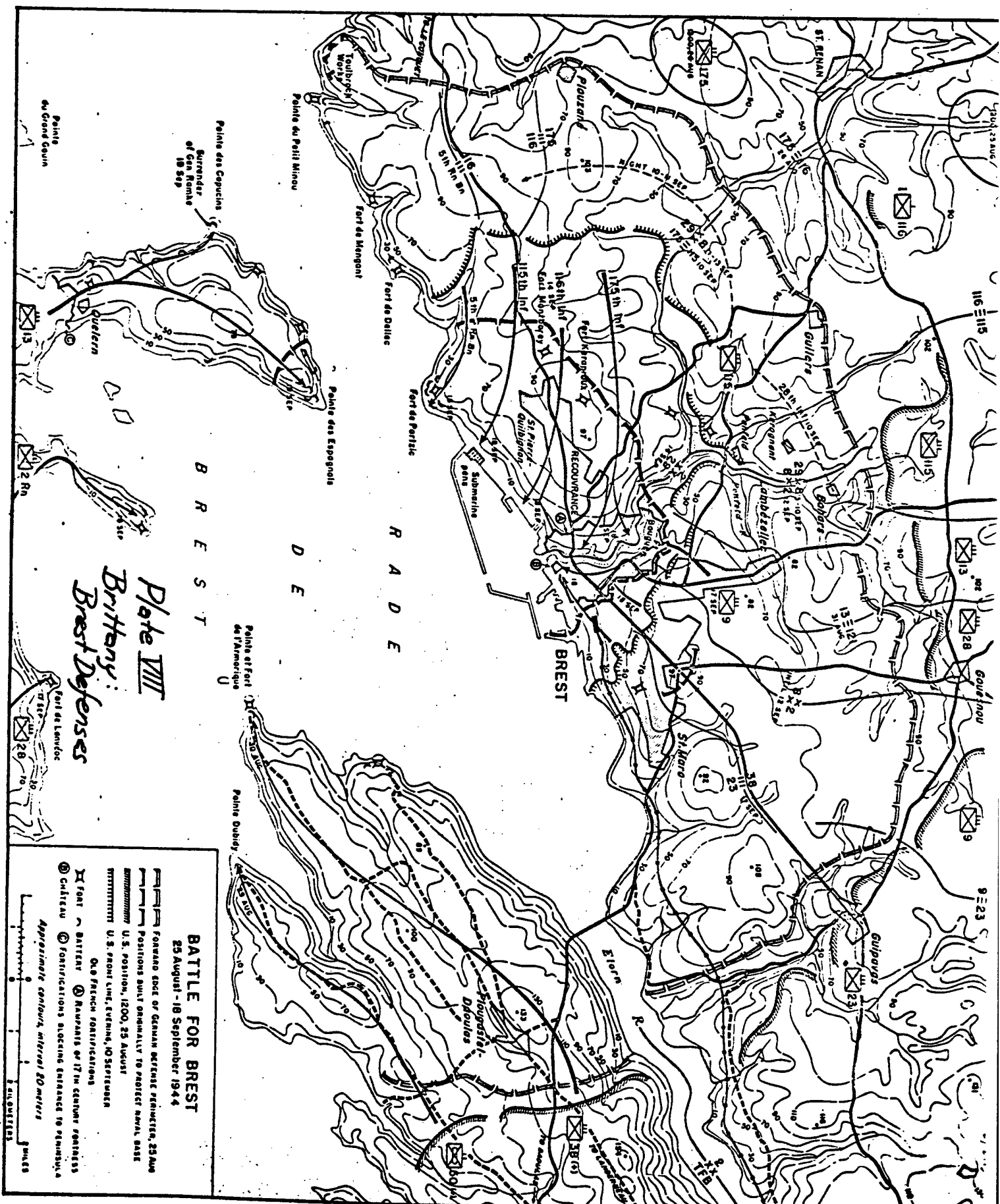
While St. Malo was undergoing attack, the city of Brest (PLATE VIII) on the western coast of the Brittany Peninsula was being loosely contained by the Americans. It had first been confronted on 7 August by an armored combat command. The garrison at that time consisted of emergency and alarm units, naval forces and a major portion of the 343d Infantry Division.<sup>13</sup> These elements, using prepared positions and emplaced artillery, had proven powerful enough

---

<sup>11</sup>Blumenson, op. cit., pp. 369-388.

<sup>12</sup>After Action Report, 83d Infantry Division, op. cit., pp. 6-13.

<sup>13</sup>Fahrmbacher, op. cit., p. 57.



to turn back early American probing attacks. On 8 August the surrender of the fortress was demanded. This was refused. On 9 August, while the Americans were engaging parts of the 266th Infantry Division which had inadvertently struck the attackers' rear, the 2d Parachute Division slipped into Brest from the south. Thus, by the time the main attack was to begin, the garrison had attained a strength of 35,000. Preliminary limited objective attacks on 11 and 12 August failed and on the latter day the Americans suspended offensive action.<sup>14</sup>

The attack was renewed on 21 August when a task force drove down the Amorique Peninsula<sup>15</sup> across the bay from Brest, about five miles distant. After subduing heavy opposition from troops of the 353d Division, the task force succeeded in capturing Hill 154 which dominated the region. By 30 August the peninsula had been cleared and the seaward side of the city exposed to observation and fire.<sup>16</sup> The main attack commenced on 25 August, by which time three infantry divisions were in contact with the German forward defense line. Semicircular in form, the line marked the beginning of a belt of minefields and field fortifications seventeen and one half miles long and four to six miles from the center of the city. Within the forward line were a number of exceptionally strong positions based upon old

---

<sup>14</sup>Blumenson, op. cit., pp. 387-388.

<sup>15</sup>Fahrmbacher, op. cit., p. 63.

<sup>16</sup>Blumenson, op. cit., p. 641, Map XV.

French forts, and an inner defense system designed to protect the naval installations west of the city.<sup>17</sup> The latter belt passed north through the center of Brest and then curved westward and southward to tie into the bay beyond the submarine facilities.<sup>18</sup>

From 25 August through 9 September the three attacking divisions pushed from three to four miles into the first fortified zone. Two of them entered the city. From 10 through 18 September the Americans fought through the streets of the city and against some of the old forts on its outskirts. The inner belt was finally breached on 16 September and the fortress capitulated on 18 September.<sup>19</sup>

Neither Lorient nor St. Nazaire were ever attacked in strength. Both ports surrendered on 10 May 1945, nine months after their initial encirclement.<sup>20</sup>

The Brittany Fortresses had been defended by remnants of first line combat units, static divisions, elements of the German Navy and Air Force, and foreign volunteers. Excerpts from an I.P.W. Team report of 20 August 1944 illustrate how heterogeneous was the body of troops defending Lorient:<sup>21</sup>

<sup>17</sup>Ibid.

<sup>18</sup>Fahrmbacher, op. cit., p. 61.

<sup>19</sup>Blumenson, op. cit., p. 651.

<sup>20</sup>Fahrmbacher, op. cit., pp. 65, 69, 117.

<sup>21</sup>I.P.W. Team #53 Report, Annex # 3 to G-2 Periodic Report #23, 6th Armored Division 20 August 1944, p. 5.



<u>Enemy Unit</u>	<u># of PW</u>
634 East Bn, . . .	27
281 Ukranian Bn, . . .	1
896 Inf Regt w/265 Inf Div . . .	3
898 Inf Regt w/343 I D, . . .	1
1221 Sec Bn, . . .	1
9 Fortress Engr Bn, . . .	1
852nd Inf Regt . . .	1
3d Fortress Base Bn XXV Army Corps, . . .	2
56 Sec Regt, . . .	1
191 Sec Regt, . . .	6
Russian Inf Lorient . . .	26
4th Georgian Bn, . . .	4
14th Para Regt, 5 Para Div . . .	1
32 GAF Regt, 16 GAF Div . . .	1
Wiesbanden, 12th Co, Air Comm . . .	1
618 Navy Comm Regt, . . .	3

This diversity was not wholly the result of defeat in the Normandy Campaign. General der Artillerie Wilhelm Fahrmbacher, who commanded XXV Corps in the defense of Brittany, noted that the May 1944 status of units was as follows:

Static divisions were stationed in the sectors of Brest (343 Div) and Lorient (265 Div); normal organization in the St. Nazaire sector (275 Div), reinforced by cadre troops (twenty-nine Cos), six Eastern Bns, coastal artillery, one Eastern Arty Bn and Navy units.<sup>22</sup>

Despite the static divisions' composition of older men, reserve officers and large numbers of Volksdeutsche and foreign volunteers, General Fahrmbacher judged that "the spirit and soldierly bearing of these units was good."<sup>23</sup> The determination with which these divisions fought attests to the correctness of General Fahrmbacher's evaluation.

---

<sup>22</sup>Fahrmbacher, op. cit., p. 6.

<sup>23</sup>Ibid., p. 11.

Considering the makeup of the forces involved, the behavior of all of the defending troops was quite satisfactory.<sup>24</sup> The only real limitations imposed by the quality of the personnel were the need for training before full use could be made of them and their inherent inability to operate as offensive forces.<sup>25</sup>

Attempts were made to maintain the morale of the polyglot soldiery. At Lorient, for example, newspaper, motion picture, and radio services were established and religious needs of the troops were met by chaplains.<sup>26</sup> Similarly contributing were the considerable efforts taken to provide safe and comfortable quarters. At St. Malo the attacking forces captured Hill 48 and found that positions there were "completely equipped with running water, air conditioning, food supplies, and all facilities necessary to withstand long siege."<sup>27</sup>

The German defenders used local civilians for some of their construction and service requirements. Part of the work, at least, was done voluntarily on a paid basis.<sup>28</sup>

The intelligence activities before and during the battles were fair to excellent in quality. The terrain

---

<sup>24</sup>Ibid., pp. 64, 71, 117.

<sup>25</sup>Ibid., pp. 87, 117.

<sup>26</sup>Ibid., p. 99.

<sup>27</sup>After Action Report, 83d Infantry Division, op. cit., p. 12.

<sup>28</sup>Fahrmbacher, op. cit., pp. 8, 99, 113, Appendix 7f.

analyses performed before the erection of the field fortifications were quite detailed. The routes of enemy approach were predicted with considerable accuracy.<sup>29</sup> Principal intelligence failings were lack of knowledge of enemy locations during the withdrawal into the fortresses, occasional lack of awareness of covered routes of approach in cities,<sup>30</sup> and a general tendency to overestimate the strength of opposing forces.<sup>31</sup>

The decision to establish fortresses brought with it requirements for considerable construction effort and material and for stockage of supplies and equipment with which to sustain long periods of isolation. Speaking of the construction effort, General Fahrmbacher said:

Generally the installations were constructed in thickness B - 2.00 meters ferro-concrete, armored strength 20-25 cm and at important points thickness A - 3.5 meters ferro-concrete, armored strength 35 - 45 cm. . . . In the Lorient sector about 650 constructions were built with a total of 480,000 cbm concrete, in the St. Nazaire sector about 560 constructions with a total of 415,000 cbm concrete and in the Brest sector about 500 constructions with a total of 380,000 cbm concrete.

Air raid shelter, submarine pens and flak constructions of the Navy were not included in the figures given about the Atlantic Wall.

The Organization Todt worked with the superintendent of building of St. Nazaire, Lorient, Brest and St. Malo according to instructions given by the fortress engineers. The number of workers was as high as 35,000 men in St. Nazaire, 25,000 men in Lorient, 20,000 men in Brest and 10,000 men in St.

---

<sup>29</sup>Ibid., pp. 57, 61.

<sup>30</sup>Blumenson, op. cit., pp. 384, 651.

<sup>31</sup>Fahrmbacher, op. cit., p. 64.

Malo for the Brittany sector.

These figures do not include men employed for the construction of naval installations.<sup>32</sup>

Despite the concentrated effort from May 1942 until May 1944, the fortresses never reached the desired strength. Field fortifications were required to replace the permanent works that were planned, particularly in outer perimetral rings. Diversion of construction forces and materials to Normandy and new emphasis on beach protection were the principal reasons for the failure.<sup>33</sup>

The provision of supplies and rations had, by May 1944, reached 75% of the target stockage of 56 days.<sup>34</sup> When the fortresses were used, however, an unanticipated problem arose. While supplies were adequate in fortresses that came under attack and fell quickly, other garrisons found that unexpectedly high troop strengths depleted stocks rapidly.

At Lorient:

Emergency measures relating to supplies were of the greatest importance. The fortress was stocked with rations for 12,000 men for a period of 56 days. It was already evident, however, that more than twice that number of men - 25,000 - would have to be supplied and that the fortress would be encircled for many more than 56 days.<sup>35</sup>

The emergency measures which were taken included strict rationing of food, reduction in available supply rates of ammunition, and curtailment of transportation. The

<sup>32</sup>Ibid., Appendix 7f.

<sup>33</sup>Ibid., p. 6.

<sup>34</sup>Ibid.

<sup>35</sup>Ibid., p. 85.

Germans also established mills and shops which produced flour, liquor, arms, tools, and shoe polish. The local population was encouraged to continue farming; seeds from Germany were provided for this purpose.<sup>36</sup>

External transportation, by sea and by air, was maintained to St. Nazaire and Lorient. Submarine chasers, which displaced about 600 tons, ran between the ports about twice a month. To Lorient they carried general cargo which had been brought to St. Nazaire by submarine from Germany. Air drop was used from time to time. Mail and seeds were delivered in this manner.<sup>37</sup>

The civilian populations of the port cities were controlled by the occupying forces through normal civil organizations. The Germans appreciated their responsibilities but never allowed the people's wishes to override military considerations. At St. Malo the mayor's request that the town be declared an open city was not heeded, but civilians were permitted to evacuate the town before the battle began. Later, during the assault, the Germans arranged a truce so that the evacuation could continue.<sup>38</sup>

At Lorient, where the siege continued for a prolonged period, the defenders developed agreements with the local administration. These included:

- 1.) Unhindered moving from threatened spots to
- 

<sup>36</sup>Ibid., p. 86.

<sup>37</sup>Ibid., p. 111.

<sup>38</sup>Blumenson, op. cit., pp. 398, 403.

places less exposed to fire.

2.) Voluntary evacuation of the number of persons agreed upon. Sick people, infirm and children to receive priority.

3.) Population to keep all goods necessary for staying alive.

4.) Supply of rations, medicine and tobacco via the Red Cross.

5.) Delivery of up to 50 liters of milk from the fortress for small children.

6.) Medical care and admission to hospitals. German woman doctor to have office hour for French mothers.

7.) Payment for services and supplies rendered. About 70 million francs were paid out.

8.) Delivery of seed to farmers.

9.) Transmittal of the mail, printing of a postage stamp and accounting with the French Post Office.

10.) No interference in cultural matters such as church services, burials, etc.<sup>39</sup>

The use of resources, time, and effort show that the fortresses were not spur-of-the-moment tactical expedients. The fortress concept was a fully implemented doctrine, part of the larger plan for the security of the continent. On 20 May 1944 Hitler, in an address to the three service Commanders-in-Chief, West, said:

By far the most important thing for the enemy will be to gain a port for landings on the largest possible scale. This alone gives a wholly special importance to the west coast ports and orders have therefore been issued designating them "Fortresses", in which the Commandant alone will be responsible for the training and operations of all three services. He has the task of doing everything possible to make the fortress impregnable. He is personally responsible for ensuring that the fortress is held to the last round of ammunition, to the last tin of rations, until every last possibility of defence has been exhausted.<sup>40</sup>

The fortresses were integral with another defense

<sup>39</sup>Fahrmbacher, op. cit., p. 112.

<sup>40</sup>B. H. Liddell Hart (ed.), The Rommel Papers (New York: Harcourt Brace and Company, 1953), p. 465.

measure. Army Group B Commander Generalfeldmarschall Erwin Rommel, specially charged with Atlantic coast defense, said in July 1943:

I therefore consider that an attempt must be made, using every possible expedient, to beat off the enemy landing on the coast and to fight the battle in the more or less strongly fortified coastal strip. This will require the construction of a fortified and mined zone extending from the coast some five or six miles inland and defended both to the sea and to the land.<sup>41</sup>

There was also a reason for the localization of effort at the ports. From a meeting in May 1944 General Fahrmbacher learned from General Rommel that "the fortresses are the decisive bases for the future submarine war."<sup>42</sup>

The fortresses had to protect against both sea and land attack. Valuable effort was thus devoted to the erection of obstacles that were never used.

The organization of the fortresses was prescribed well in advance. It was, however, complex and not fully effective. Each fortress had a commandant and staff, but no troops. These were to come from the combat elements which manned the garrisons. The commandant's functions were to coordinate the efforts of the diverse elements which composed the garrison and to administer logistic actions. Hitler's dictum notwithstanding, the commandant was not to assume tactical command until the fortress had been encircled.<sup>43</sup> Higher level control of all of the defense was the

---

<sup>41</sup>Ibid., p. 453.

<sup>42</sup>Fahrmbacher, op. cit., p. 9.

<sup>43</sup>Ibid., p. 79.

responsibility of XXV Corps.

The fortress commandants had some difficulty in aligning the operations of the army, navy and air force units in the garrisons. And when the battles began and defeated divisions fell back upon the fortresses, the designated commandants were frequently replaced by the more senior division commanders. At St. Malo the commandant chose to share his command with the commander of the 77th Division, giving territorial responsibility for the Dinard portion of the defense to the latter and keeping the rest for himself.<sup>44</sup> At Brest the designated commandant became chief of staff for the commander of the 2d Parachute Division<sup>45</sup> and at Lorient the commandant was reduced to headquarters commandant when the XXV Corps headquarters arrived.<sup>46</sup>

The control of the defense of Brittany was soon lost to XXV Corps. It could not influence the early battle at St. Malo.<sup>47</sup> About Brest, General Fahrmbacher said:

On 7 August Heeresgruppe Genfldm Von Kluge ordered XXV Corps to take over command of Brest. This order was not carried out, however, as

1.) Brest already had four higher commands (two division staffs, one fortress commander, one naval commander), while Corps Hq was the only agency which could command in Lorient.

2.) contact on land had already been disrupted and on sea was uncertain and unprepared.

Up to 16 August Corps Hq retained command in the Brest sector, but it was limited to reports on the situation

<sup>44</sup>Blumenson, op. cit., p. 401.

<sup>45</sup>Ibid., p. 639.

<sup>46</sup>Fahrmbacher, op. cit., p. 84.

<sup>47</sup>Ibid., p. 56.



gathered from radio messages. From that day Genlt Ramke commanded Brest independently by request of Corps Hq.<sup>48</sup>

Thus the battles for the fortresses were independent conflicts directed almost exclusively by the defenders on the sites.

The design of the defenses had been subject to limitations which were recognized by the Germans. These were anticipated garrison strengths of from 10,000 to 15,000, the requirement for simultaneous development of sea and land barriers, and a restricted supply of labor and materials. Although optimum defensive perimeters had been determined on the basis of terrain studies, they were not used. Instead, realistic compromises were made. The resulting defense systems made optimum use of resources at hand, including existing structures. They were rather cramped and were less deep than desirable but they offered reasonable assurance of protection for key points in the cities.<sup>49</sup>

The conduct of the defenses of St. Malo and Brest were quite conventional. The small defensive areas resulted in early penetrations to points close to the attackers' objectives, but the density of obstacles and strongpoints within the area slowed the attacking forces and permitted the defenders to hold out for significant periods of time.

Activities within the other garrisons are of special

---

<sup>48</sup>Ibid., p. 58.

<sup>49</sup>Ibid., pp. 60, 67, 82.

interest since there the defenders had a chance to survey their situations and determine the steps needed to improve them. General Fahrmbacher, speaking of Lorient, said:

The garrison in August consisted of approximately 26,000 men. Only 800 had received complete infantry training . . .

Their physical fitness varied widely. In addition to very young sailors there were numerous men over age (some more than 60 years old) who had hardly any or no military training. Nonetheless training and retraining had to be initiated at once to gain personnel for manning the fronts . . . .

. . . In addition there had to be an appropriate number of Officers and NCO's. Naval officers, engineers, specialists, administrators, bandleaders etc. had to be trained for taking charge of companies and platoons, and there had to be a reserve of officers.

It may be said that, particularly during the winter months, even the officers of Corps Hq were busy delivering daily lectures and conducting field exercises to that end.<sup>50</sup>

Despite the training of their personnel, the five Wehrmacht infantry regiments finally formed at Lorient were restrained from major offensive operations. A corps order said:

The fortress of Lorient will be held. A decision must be forced in battle for the MLR. Where terrain and forces permit, a foreground is to be created in the sectors which is to be improved to field strength. Good observation and lively activity on the part of reconnaissance patrols must at all times furnish an exact picture of enemy activities so as to prevent surprise. Combat activity is to be limited to small well-prepared undertakings and to firing on known, worthwhile objectives. No larger attempts are planned for the time being. Firing of guns of more than 15 cm and demolitions are reserved for Corps. More mines are to be layed in the harbor, arsenal and submarine pens.<sup>51</sup>

What did the defense of the Brittany Fortresses accomplish? Their presence may have influenced the decision, but

---

<sup>50</sup>Ibid., p. 92.

<sup>51</sup>Ibid., p. 88.

the Allies did not decide to land in the zones of any of the fortresses. The capture of St. Malo<sup>52</sup> and Brest cost the Americans about 11,800 casualties, but the German loss, in prisoners alone, was about 50,400.<sup>53</sup>

When finally captured, the ports were so badly damaged that they were useless to the Americans. But that could have been accomplished by demolition as well as prolonged defense. By the time the ports actually fell, they were no longer important to the campaign that was moving rapidly eastward.<sup>54</sup>

The successful defenses of Lorient and St. Nazaire tied up American troops. But at Lorient, for example, it took 26,000 defenders to hold one division in place.

Some submarines continued to use the ports. General Fahrmbacher noted that "seven repaired submarines could leave Lorient by the beginning of September and return to their home port."<sup>55</sup>

The fortresses did provide a haven for scattered elements of divisions defeated elsewhere. Perhaps better use could have been made of them, either as a unified defense force based deep in the Brittany Peninsula or as fillers for other divisions which withdrew across France.

---

<sup>52</sup>After Action Report, 83d Infantry Division, op. cit., p. 19.

<sup>53</sup>Blumenson, op. cit., p. 653.

<sup>54</sup>Dwight D. Eisenhower, Crusade in Europe (New York: Doubleday and Company, Inc., 1948), p. 283.

<sup>55</sup>Fahrmbacher, op. cit., p. 111.

The fortress preparations were examples of careful use of resources based upon detailed studies of the terrain and enemy. They were also examples of the depletion of resources when missions become too diverse. The outstanding characteristic of the defense preparations was the great cost involved in the erection of permanent fortifications.

The active defense battles showed that the value of permanent fortifications is open to serious question. Although isolated strongpoints did hold out after the rest of the defense had collapsed, the duration of their resistance was still relatively short. By contrast, the obstacles presented by slightly prepared built-up areas within the cities were formidable.

Other factors illuminated by the Brittany operations were the need for realistic command arrangements and the fallacy of a doctrine based upon long term isolation of major forces. Instead of threats to the attackers, the fortresses became prisons for the defenders. Large bodies of troops were contained by smaller numbers of attackers who had only to assure that supply lines to the fortresses remained cut.

## CHAPTER IV

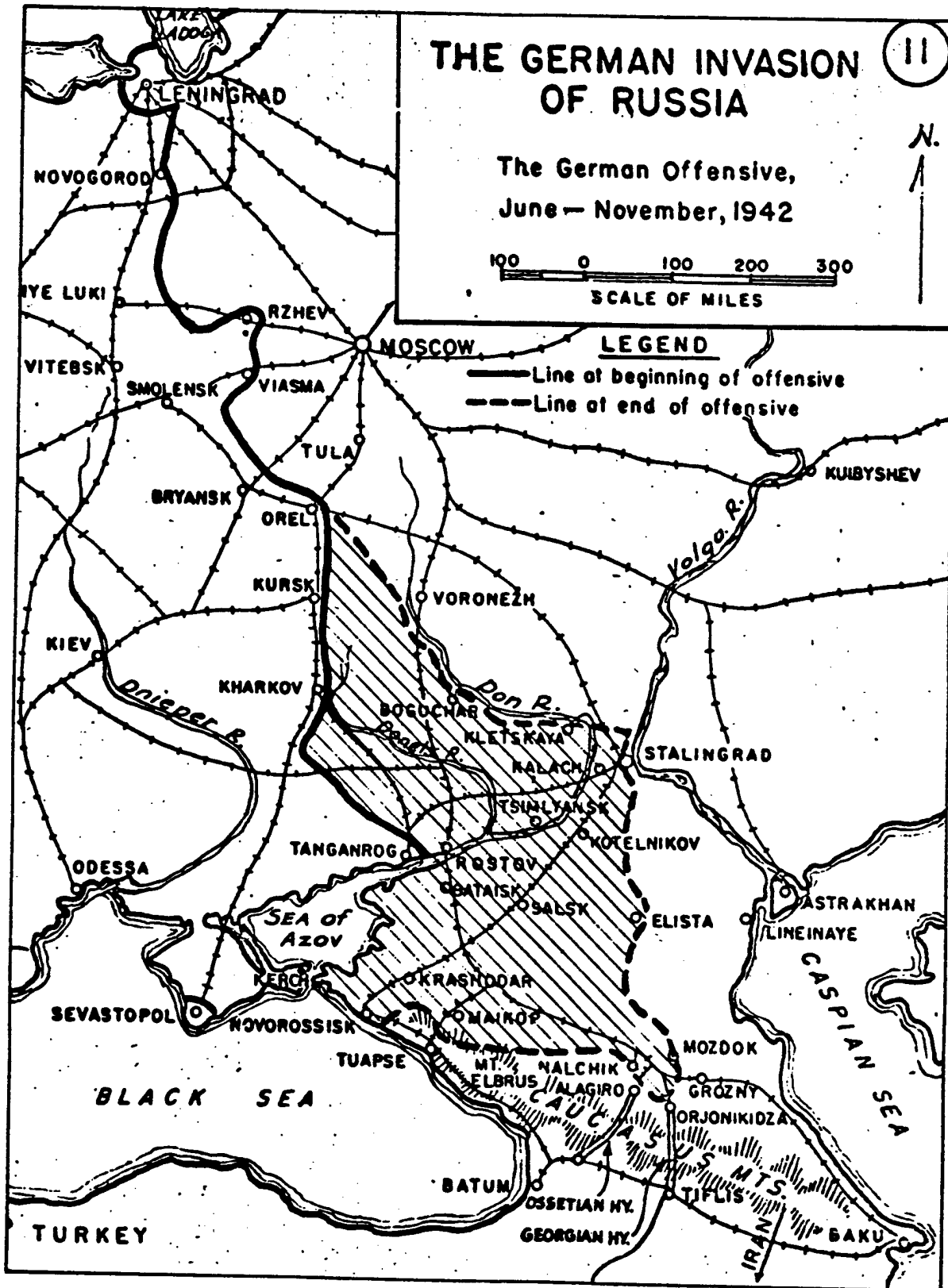
### THE BATTLE FOR STALINGRAD

The battle for Stalingrad took place in late 1942 and early 1943. During its course attackers became defenders; problems which had once been Russian became German. How well each side solved them determined the outcome of the contest. The factors involved in their solution are common to many protections of major urban population centers. For this reason the battle for Stalingrad gives an excellent insight into the motives, risks, and techniques of such defenses.

The city of Stalingrad is located 550 miles southeast of Moscow on a neck of land between the Don and Volga Rivers. (PLATE IX) The Volga, which flows south, and the Don, which makes a great curve eastward, converge to within thirty five miles of each other at the city. Stalingrad's physical arrangement is unique; it has no major suburb across the river to the east and itself is arrayed tapewise along the Volga for about thirty five miles. Its east-west dimension is very short, at its widest it is two and one half miles.<sup>1</sup>

---

<sup>1</sup>Ronald Seth, Stalingrad: Point of Return (New York: Coward-McCann, Inc., 1959), p. 46.



*Plate IX Stalingrad: Location and Situation*

The battle for Stalingrad began on 21 August 1942 when elements of the German Sixth Army forced crossings over the Don west of the city. By the evening of 23 August armored units reached the Volga near Rynok, about ten miles north of Stalingrad, and simultaneously engaged the northern defenses of the city. Soviet resistance, once the crossings had been achieved, had been light.<sup>2</sup> Although the German plan called for the elements just described to make the main effort, a subsidiary drive from the south was also launched. The secondary force ultimately drove to the center of Stalingrad<sup>3</sup> but was relieved from further responsibilities there at that time.<sup>4</sup>

By 13 September the Germans had forged a ring around Stalingrad. Forces comprising about nine divisions were in offensive dispositions. These reached the Volga north and south of the city and assumed a roughly semicircular, concave shape, fifteen miles long and six miles deep. (PLATE X) Opposing the Germans were the remnants of seven or eight Russian Divisions subordinate to the Sixty Second Army under the command of General Chuikov.<sup>5</sup>

On 14 September the southern German forces joined with elements in the west in attempting to secure the southern

---

<sup>2</sup>Heinz Schroter, Stalingrad (New York: E. P. Dutton and Company, Inc., 1958), p. 32.

<sup>3</sup>Alexander Werth, The Year of Stalingrad (New York: Alfred A. Knopf, 1947), p. 205.

<sup>4</sup>Schroter, op. cit., p. 42.

<sup>5</sup>Werth, op. cit., p. 207.

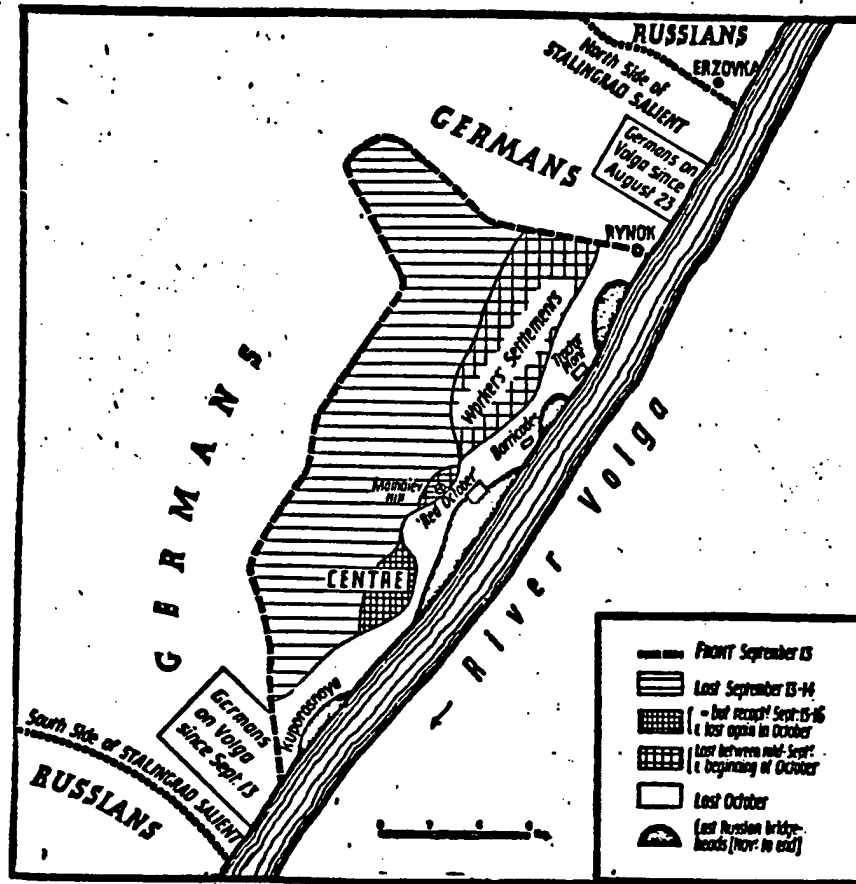


PLATE X Stalingrad: The Bridgehead



portion of the city and drive a wedge to the Volga near its center. Although neither goal was achieved, the Russian bridgehead was reduced to a strip along the river varying in width from three miles in the north to less than a mile in the center of the city. On the following day a Soviet counterattack by a newly arrived division restored a little of the lost ground and a key hill which provided observation over the city and the river.<sup>6</sup>

As the Russian holdings were pushed closer to the river, the defense stiffened. The presence of increasing numbers of stone and concrete buildings provided natural strongpoints for defense. From 15 September until about 1 October, the attackers concentrated upon the less sturdy workers' settlements in the northwestern section. Most of this region was cleared by the end of the month, by which time the Germans held all of Stalingrad but a strip about fifteen miles long and a mile and a half wide.<sup>7</sup>

By the end of October the Germans had reached the high water mark of their campaign. The Russian territory had been reduced to four bridgeheads, the largest of which was located in central Stalingrad and measured four miles in length and less than a mile in depth.<sup>8</sup> To make these advances the attackers had engaged in almost ceaseless house-to-house fighting; casualties had been very high and

---

<sup>6</sup>Ibid.

<sup>7</sup>Ibid., p. 208.

<sup>8</sup>Ibid.

their ability to continue the attack diminished.<sup>9</sup>

From 1 November until 11 November the Germans limited their offensive action to small scale encounters. On 12 November they made a major effort. Although the attack was made on smaller frontages than usual and revealed more flexibility and resourcefulness, they made negligible gains.<sup>10</sup> The first phase of the battle for Stalingrad had reached its end.

On 19 November Soviet forces, which had been building up north and south of Stalingrad, began the Russian Winter Offensive of 1942-3. Red Army elements struck southwest from the vicinity of Serafimovitch, one hundred miles northwest of Stalingrad and from near Kachalino, fifty miles northwest of the city.<sup>11</sup> Simultaneously, other attacks were made from the area of Malo Derbety, sixty miles southeast of Stalingrad. These progressed in a northwesterly direction.<sup>12</sup> Despite counterattacks by corps size German elements, the Russians, by 22 November, completed a wide encirclement of Sixth Army.<sup>13</sup>

The situation within Sixth Army became serious. Directed to remain in the Stalingrad pocket, it first contracted

---

<sup>9</sup>Schroter, op. cit., p. 37.

<sup>10</sup>Werth, op. cit., p. 314.

<sup>11</sup>Friedrich Schulz, "Reverses on the Southern Wing (1942-1943)." Heidelberg: Historical Division, United States Army, Europe, n.d., pp. 22-23.

<sup>12</sup>United States Military Academy, "Operations on the Russian Front." West Point 1948, Pt. 2, p. 4.

<sup>13</sup>Schulz, op. cit., p. 35.

its perimeter and then launched a series of sharp attacks upon the defenders of the city. These lasted from 12 to 31 December.<sup>14</sup> At about the same time a massive attempt was made by the Fourth German Panzer Army to relieve the city from the south. This thrust failed as the Russians limited its furthest advance to a point about forty five miles southwest of the encircled army.<sup>15</sup>

During the first part of January, Sixth Army, feeling the effects of a worsening supply situation, remained in a defensive posture. The Russians, occupied elsewhere, also remained quiet. Then, on 8 January, they delivered an ultimatum to the encircled army, demanding its immediate surrender. The demand was refused.<sup>16</sup>

On 10 January 1943 the Soviets launched their offensive to destroy the Sixth Army.<sup>17</sup> They attacked from south, west, and from within Stalingrad itself.<sup>18</sup> By 19 January the German zone had shrunk from a pre-attack size of thirty seven miles in depth and twenty five in width to a depth of ten miles and a width of thirteen.<sup>19</sup> By 23 January the

---

<sup>14</sup>United States Military Academy, "Operations on the Russian Front," op. cit., p. 7.

<sup>15</sup>F. W. von Mellenthin, Panzer Battles, (Norman: University of Oklahoma Press, 1955), pp. 191-196.

<sup>16</sup>Schroter, op. cit., pp. 174-176.

<sup>17</sup>United States Military Academy, "Operations on the Russian Front," op. cit., p. 8.

<sup>18</sup>von Mellenthin, op. cit., p. 199.

<sup>19</sup>Ibid., p. 198.

last usable airfield had fallen<sup>20</sup> and by 26 January the bridgehead had been split into two isolated strongpoints in the city.<sup>21</sup> On 31 January, having lost control of subordinate elements fighting in isolated pockets, Sixth Army surrendered.<sup>22</sup> Only XI Corps, in a ring to the north, continued to resist. It was finally overrun on 2 February.<sup>23</sup>

The forces involved in the battle for Stalingrad were composed of well trained<sup>24</sup> and in some cases, very experienced,<sup>25</sup> troops. The combat use of civilians by the Russians was confined to the early stages of the battle.<sup>26</sup> By the time the Russians seized the initiative, the Germans had placed twenty divisions at Stalingrad or in supporting sectors.<sup>27</sup> The divisions on line were not at full strength, however; the intensity of the battle had claimed high casualties.<sup>28</sup> The Russians state that their forces, exclusive of logistic elements, varied in size from 35,000 to 45,000, at first consisting of the remnants of seven or eight divisions and later containing new divisions sent to reinforce

---

<sup>20</sup>Ibid., p. 201.

<sup>21</sup>Schroter, op. cit., p. 253.

<sup>22</sup>Ibid., p. 252.

<sup>23</sup>Seth, op. cit., p. 246.

<sup>24</sup>Schroter, op. cit., p. 19.

<sup>25</sup>Werth, op. cit., p. 207.

<sup>26</sup>Seth, op. cit., p. 74.

<sup>27</sup>Schroter, op. cit., p. 51.

<sup>28</sup>Schulz, op. cit., p. 20.

the garrison.<sup>29</sup> They reckoned the German strength as three times their own, about 120,000, but this figure is undoubtedly high.<sup>30</sup>

An important difference in the quality and number of replacements existed. The Russians, planning for the great offensive to come, meted out new troops in sufficient numbers to keep the force level constant. As the Soviets were pushed back into the Stalingrad bridgehead, the troop density thus increased. In the days immediately before the attack of 19 November, it is doubtful if the Soviet positions could have accommodated more troops than had been provided.<sup>31</sup> The quality of the defenders also improved as the battle wore on. Alexander Werth quotes Professor Major-General N. Talensky of the Red Army on this subject:

But during the first stage our losses were, of course, very heavy indeed. And yet, the people who survived acquired a tremendous experience in the technique of house-to-house fighting. Two or three men of such experience could be worth a whole platoon. . . .

. . . . .  
The people who, since the start, had constituted the nucleus of Stalingrad's defence survived in most cases; even far more of the Guards divisions who came later, and who bore the brunt of the heaviest fighting, especially in October, survived than could be believed possible. For they also were specially trained men - many of them Siberians with nerves as hard as steel and all their wits about them.<sup>32</sup>

The Germans also brought in replacements, but these

<sup>29</sup>Werth, op. cit., p. 210.

<sup>30</sup>Ibid., p. 209.

<sup>31</sup>Ibid., p. 210.

<sup>32</sup>Ibid., p. 215.

came in relatively small numbers from a limited body of available reserves. Engineers, specially skilled in demolitions, were thrown into the fight, but infantry replacements were difficult to obtain.<sup>33</sup>

The comparative morale of the opposing sides is difficult to judge from published accounts. The German commanders themselves were not unanimous in accepting the wisdom of the Stalingrad operation. For example, the commander of the IV Corps, General von Schwedtler, asked the commander of the Fourth Panzer Army, "If Stalingrad is to be of no use to us strategically, what is to be gained by occupying these ruins beside the Volga?"<sup>34</sup>

The Soviet troops, from their own accounts at least, maintained a reasonable level of spirit. Werth recounts the remarks of a Guards Division Lieutenant, Lutsenko, in November 1942:

Prisoners have told me that when German soldiers are told they are being sent to Stalingrad, it has a very depressing effect on them. Our people, of course, know what a tough spot it is. But for a Russian soldier to be sent to Stalingrad has now a hell of a prestige value attached to it.

All of us have observed one very odd difference between ourselves and the Germans. Nearly every morning we shave; the Germans are all unshaved, intidy, filthy and verminous. In our dugouts, which aren't uncomfortable for the most part, we have odd pieces of soft furniture even, and decent bunks, and musical instruments, and we have books and newspapers, and at the command posts they have electric light, and hot food is carried regularly to the front line, usually two hundred or three hundred metres away;

---

<sup>33</sup>Schroter, op. cit., p. 40.

<sup>34</sup>Ibid., p. 43.

and every week -- no matter how heavy the fighting -- every soldier goes to the bathhouse, and also gets a set of clean underwear.<sup>35</sup>

The combat intelligence efforts of both sides were made difficult by the concealment provided by the ruins of the city. Werth quotes Red Star for 22 September 1942:

. . . The firing points of the company were all well camouflaged and fortified. Observation was particularly well organized: wherever the enemy might appear, he would be immediately detected. There was careful patrolling at night. As we know the German Tommy-gunners often dress up as Red Army men at night in an attempt to break into our line.<sup>36</sup>

Information gathering outside the city was effective. The German field commanders were aware of the hazards of Russian buildups and the arrival of winter. General Schulz, Chief of Staff of the German Don Army Group, summarized the available intelligence:

The commanders of Army Groups A and B had warned of the impending winter as early as September. . . .

Furthermore, since mid-October the picture of the enemy situation had steadily become clearer. Bitter enemy resistance in the fighting for the strip of land between the DON and VOLGA and, finally, for STALINGRAD itself indicated that the enemy was trying to gain time in order to evacuate the valuable industrial installations along the VOLGA. Later, air reconnaissance, agent's reports, and prisoner-of-war statements strongly indicated that the Red command was winding up for a counterpunch north of the Don. The main effort was likely to fall in the area of SERAFIMOVITCH in the sector held by the Roumanian Third Army.<sup>37</sup>

That the Soviet Army's intelligence was at least as

---

<sup>35</sup>Werth, op. cit., p. 304.

<sup>36</sup>Ibid., p. 231.

<sup>37</sup>Schulz, op. cit., p. 12.

good as the Germans' is demonstrated by the Russians' strike at weak Roumanian forces north and south of Stalingrad. A less obvious example was the Soviet appraisal of the German High Command's attitude concerning Stalingrad. The Russian Sixty Second Army was kept just strong enough to hold the city; the Russians correctly estimated that Sixth Army, once committed in the battle for Stalingrad, would not be permitted to disengage.<sup>38</sup>

The logistical conditions within the opposing armies were quite different. Transportation and organization contributed to this disparity, as did the difference in temperament of the troops. Many of the Soviet troops were from less sophisticated environments than were the Germans; their demands were simpler and their subsistence level lower.<sup>39</sup>

The transportation system of Russia was poor. For the German Sixth Army, even before encirclement, it was particularly bad. Schroter, describing this, noted:

Sixth Army's railhead was at Chir, whence supplies went by road to Kalatch. At Kalatch they were reloaded on to trains and brought up to the Army's main supply base via Karpova and Voroponovo. The railway bridge over the Don at Chir had been destroyed by the Russians.<sup>40</sup>

When the Russian encirclement was completed, the Sixth Army no longer had access to even limited rail input. An airlift was conceived which was to sustain the German forces

<sup>38</sup>Werth, op. cit., p. 213.

<sup>39</sup>von Mellenthin, op. cit., p. 294.

<sup>40</sup>Schroter, op. cit., p. 45.



until relief. Although its previous requirements amounted to 750 tons per day, it was felt that Sixth Army could survive if 550 tons were flown in. The Army General Staff was skeptical of the Luftwaffe's ability to transport materiel in this quantity, but on 24 November Hitler received Goering's personal assurance that it would be done.<sup>41</sup> The airlift never approached its required performance; on 26 December, only a month after its activation, the airlift could fly only seventy tons into Stalingrad.<sup>42</sup>

The Soviet supply service also had to cope with the limited Russian rail network. With all of the north-south lines west of Stalingrad in German hands, it could ship by rail only to a point about seventy five miles northwest of the city. From there materials had to be hauled overland to the Volga and then across it to the east. The Volga itself was a significant artery for the shipment of materiel. Russian industries in the Urals developed rapidly and the river formed a natural channel for delivery of their output to Stalingrad. But like the railroad, the Volga was dominated by the Germans north of the city.

All supplies, regardless of source, had to be brought to the eastern shore of the river, carried overland to a point opposite Stalingrad, and then delivered across the Volga to the defenders of the city. Crossing at night, and

---

<sup>41</sup>Schulz, op. cit., p. 46.

<sup>42</sup>Erich von Manstein, Lost Victories (Chicago: Henry Regnery Company, 1958), p. 351.

sometimes under the cover of gunboats which the attackers could not destroy, small steamers, launches, and rowboats delivered supplies and evacuated wounded.<sup>43</sup>

Part of the German supply difficulties stemmed from faulty organization. Even before the encirclement some shortages, notably of winter clothing, were observed. Although thousands of garments were stored at depots near the front, administrative or tactical difficulties prevented their issue to the combat troops.<sup>44</sup> Other materials were simply unavailable. When, in October, the Army High Command required the erection of concrete fortifications and heated bunkers for tanks, it was discovered that neither cement nor wood were present in useful quantities. The building project was never begun.<sup>45</sup> After the encirclement and the failure of the airlift, all supplies became critically short. Schroter notes, for example:

An inevitable result of the inadequate air lift was that at Christmas it was no longer possible to avoid a further cut in the bread ration. Since it was Christmas, this was not made known until the 26th of December. From that day each man got two ounces of bread; at midday he got rather less than a quart of soup without fat, made mostly from vegetables; and in the evening he was issued with tinned food, or a second bowl of thin soup. The result was a rapid and general decline in the men's powers of endurance.<sup>46</sup>

---

<sup>43</sup>Werth, op. cit., p. 303.

<sup>44</sup>Schroter, op. cit., p. 46.

<sup>45</sup>Ibid., p. 55.

<sup>46</sup>Ibid., p. 152.

The most drastic effect of the supply shortage was the virtual immobilization of the German armor. When plans for the relief of the Sixth Army were being made it was determined that fuel supplies were so low that its tanks could go no more than twenty miles. Principally for this reason the Sixth Army was ordered to remain in place and the burden of reestablishing contact was placed upon the Fourth Panzer Army.<sup>47</sup>

The Soviet supply picture, while not flawless, became better as time passed. In October, at the height of the German drive, standard rations for the defenders were 900 grams of bread and two hot meals daily.<sup>48</sup> Vodka for enlisted men and brandy for officers were staple parts of the diet. Werth noted that "the following priorities were in force on the difficult and dangerous Stalingrad supply lines across the Volga; first, arms and ammunition; second, vodka; third, food."<sup>49</sup>

The peculiar tactical disposition of the Russian forces made at least one part of the supply problem relatively easy to solve. While the units in the city were equipped with the usual small arms and anti-tank weapons, their heavy artillery was emplaced east of the Volga. Therefore, most of the heaviest item of supply, artillery ammunition, never had

---

<sup>47</sup>von Manstein, op. cit., p. 338.

<sup>48</sup>Werth, op. cit., p. 282.

<sup>49</sup>Ibid., p. 217.

to make the journey across the river.<sup>50</sup> A similar saving was achieved by operating a small number of vehicles within the city. Transport of fuel was very limited.<sup>51</sup>

In mid-July civilians not engaged in war activities had been drafted for the erection of field fortifications. The most notable of these was an anti-tank ditch, fifteen feet deep, twelve feet wide, and twenty five miles long, which almost cordoned the city from north to south.<sup>52</sup> At the end of July a limited evacuation of elderly, young, and mothers was undertaken.<sup>53</sup> Other Soviet civilians of military age, both male and female, were organized into paramilitary forces.<sup>54</sup> While the factories remained in operation the workers continued to produce. Later they assisted in the defense by joining army units or workers' battalions.<sup>55</sup> Many people remained in territory annexed by the Germans. Of these, Schroter said:

Life was driven underground. In the unending battle, the civilian inhabitants of Stalingrad were compelled to leave the ruins of their homes and, on orders of Sixth Army, to move off westwards. It was a tragic march. They attempted to reach the villages on the far side of the Don, but only a few succeeded. Thousands collapsed, exhausted, by the roadside; starving and frozen, there they died. There was no one to help them.<sup>56</sup>

<sup>50</sup>Ibid., p. 212.

<sup>51</sup>Ibid., p. 209.

<sup>52</sup>Seth, op. cit., pp. 60-62.

<sup>53</sup>Ibid., p. 67.

<sup>54</sup>Ibid., p. 66.

<sup>55</sup>Werth, op. cit., p. 217.

<sup>56</sup>Schroter, op. cit., p. 37.

No major attempt at evacuation was made by either participant. There was also no serious effort undertaken to alleviate civilian hardship.

What were the operational factors that led to the German defeat at Stalingrad? General Talensky, when interviewed by Alexander Werth, gave six:

(1) The bravery, stamina and skill of our troops -- this, in the circumstances, was of absolutely vital importance.

(2) The peculiar conditions of the battle inside a city like Stalingrad. As soon as the troops had adapted themselves to these conditions, the Germans were no longer able to strike a massive blow of the "Battering-ram" variety; nor did the Germans have any scope for wide manoeuvring with large striking-forces. Their biggest all-out attempt at a break-through was made in October; but even here they achieved only partial successes, precisely because they were unable to concentrate a sufficiently large and sufficiently mobile striking-force against our positions in Stalingrad. There was no scope for any outflanking movements as there would have been, with the forces at their disposal, in open country. Their tanks were able to operate only in small groups.

(3) Very elaborate preparations had been made for developing among our troops a highly perfected technique of street fighting; on the initiative of Stalin special instructions, worked out down to the finest details, were given to our troops.

(4) The presence of large anti-tank forces and anti-tank weapons in Stalingrad, and the establishment of a dense network of well-dug-in firing-points. A large part of the infantry were armed with anti-tank rifles, and they inflicted enormous losses on the Germans, who were, in the main, still using the T4 tank, vulnerable to anti-tank rifle-fire; through sheer digging-in Stalingrad had, largely in the process of the battle, become a fortress.

(5) The Russian artillery on the other side of the Volga, where the Germans could not get at it, was very strong indeed. From about the middle of September, if not before, we constantly had there as many as 200 heavy long-distance guns, besides masses of lighter artillery and the invaluable Katyusha mortars. On the average we had 100 guns per kilometre opposite Stalingrad, and these guns pounded the Germans mercilessly.

(6) The admirable organisation -- despite appalling difficulties -- of a constant flow of supplies to

Stalingrad.<sup>57</sup>

The reasons given by General Talensky are surely valid with respect to the battle within the city, but the failure of the whole campaign can be attributed to more fundamental causes. There were three main reasons for the Soviet success. These were the correct Russian appraisal of German capabilities and intentions, the failure of the Germans to isolate the city, and the ability of the Soviets to provide reinforcements and supplies as needed to maintain the defense.

That the Russians knew that the Germans were coming to Stalingrad is amply demonstrated by the preparations initiated there in mid-July. As early as 18 June they had captured documents which specified the city as the objective of Sixth Army.<sup>58</sup> The Soviets did not have the combat power to stop the drive of the Sixth Army; they had suffered numerous losses in earlier campaigns and had not yet mobilized the forces which were later to stage their counter-offensive. Probably based upon this lack of strength, they made no concerted effort to delay the attackers before the city. Instead they allowed their forces to be pushed out of the way, principally to the north, where they managed to hold some bridgeheads over the Don.<sup>59</sup> By the time that

---

<sup>57</sup>Werth, op. cit., p. 200.

<sup>58</sup>Schroter, op. cit., p. 24.

<sup>59</sup>Werth, op. cit., p. 213.

Sixth Army had reached Stalingrad, it found itself at the tip of a salient, along its northern flank, which extended to Kletskaya, eighty miles to the west.<sup>60</sup> Of the divisions available to it, the army had nine oriented to the north, protecting that flank.<sup>61</sup> The Russians, by limited offensive actions, made certain that the Germans never forgot the flank. German divisions there were kept in place and could not contribute to the assault on Stalingrad.<sup>62</sup>

The German failure to encircle Stalingrad was due both to geography and tactical action by the Red Army. The Volga at Stalingrad is more than a mile wide; it has not been bridged. The effort required to erect a temporary crossing would have been very great, had it even been contemplated. The Germans did not intend to cross the Volga, however, but planned to move to the south along its west bank.<sup>63</sup> In the manner already discussed, the Soviets prevented the isolation of the city by fire in lieu of encirclement.

The Soviet ability to reinforce and resupply, combined with their ability to influence the input of German resources, enabled them to control the conflict even when the initiative was supposedly the Germans'. The control was desirable not only because it enabled the Russians to hold the city but also because it allowed them to keep the Germans

---

<sup>60</sup>Schulz, op. cit., p. 14.

<sup>61</sup>Schroter, op. cit., p. 57.

<sup>62</sup>Werth, op. cit., p. 213.

<sup>63</sup>Schulz, op. cit., p. 10.

from disengaging. As long as Sixth Army remained at Stalingrad it could not interfere with Russian preparations for the winter offensive.

Not all of the battle went according to Soviet plan. Field fortifications, constructed in the outskirts of the city, were not manned in sufficient strength and were quickly lost. Deprived of their cover, the Red Army was forced to fall back into the heart of the community where masonry and concrete buildings afforded sites for strongpoints.<sup>64</sup> That this had not been planned is shown by the efforts to prepare positions during the course of the battle.<sup>65</sup>

The German defense of Stalingrad was ordered by Hitler.<sup>66</sup> His motives were both political and tactical. He had become fascinated by the prospect of capturing the city which bore the name of his rival and had publicly predicted its fall. He felt that Stalingrad should still be taken despite the Russian advances of mid-November.<sup>67</sup> As the army's situation became more desperate he also became convinced of a military advantage to a continued attack in the city. Both he and General Erich von Manstein, who commanded Army Group Don, concluded that Sixth Army's continued presence at Stalingrad would contain Soviet forces which

---

<sup>64</sup>Werth, op. cit., p. 206.

<sup>65</sup>Ibid.

<sup>66</sup>von Manstein, op. cit., p. 365.

<sup>67</sup>Schulz, op. cit., p. 25.



otherwise would add to the attackers' combat power.<sup>68</sup>

The final German operations were not really in defense of a major urban population center; they were in defense of a trapped army. Their interest lies only in their contrast to the successful Soviet efforts in the same area. Encircled, denied supplies and reinforcements and lacking an affinity for the land and its people, the German forces were quickly destroyed. 350,000 troops and much materiel were lost in the Stalingrad venture.<sup>69</sup>

The battle for Stalingrad showed that a defender can do a great deal to influence the battle. If he can reinforce and resupply he can cause the attacker to expend great effort to achieve small territorial success. If he can interfere with the attacker's ability to resupply and reinforce, he may be able to limit the engagement to a size manageable by his own forces. The defender must remain alert to weaknesses in the enemy strengths, dispositions, and logistics and must act to safeguard his own. Once either side loses the ability to reinforce or resupply, it cannot sustain the battle.

More concrete points highlighted by the battle included the great obstacle value of a city, the value of adequate flank protection, and the need for consideration of all means of transportation to assure continuing supply to the defense.

---

<sup>68</sup>von Manstein, op. cit., pp. 353-354.

<sup>69</sup>Schulz, op. cit., p. 45.

## CHAPTER V

### THE BATTLES FOR SEVASTOPOL, SMOLENSK, STRASBOURG, AND VIENNA

This chapter presents brief resumes of four battles. Each illustrates some facets of the defense of major urban population centers which bear upon the development of doctrine. No attempt is made to analyze the battles fully. Special note is made of important events or circumstances.

#### The Battle for Sevastopol

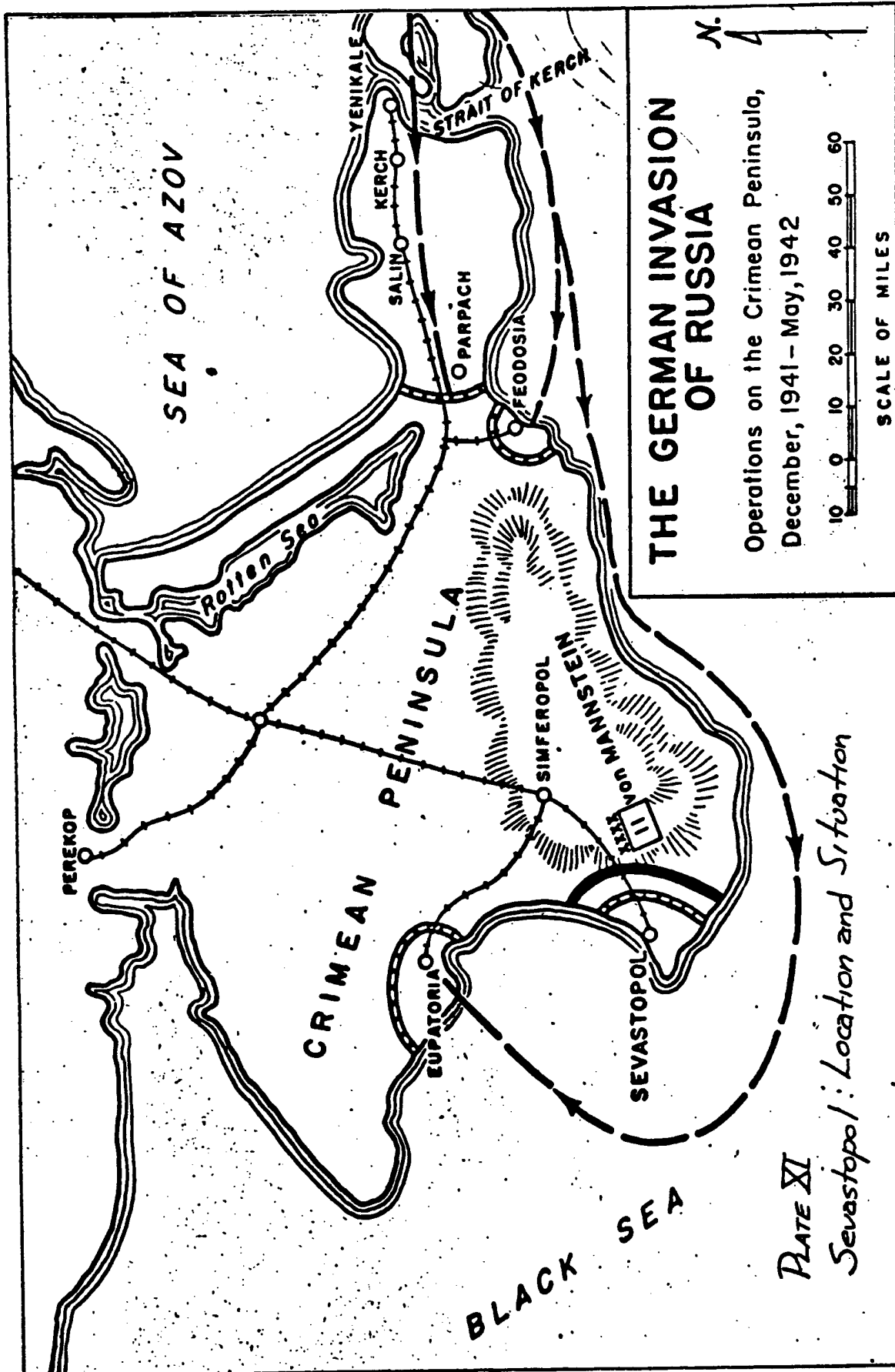
The battle for Sevastopol occurred in the autumn and winter of 1941 and the spring and summer of 1942. It lasted for two hundred fifty days and for most of that period prolonged the German campaign to conquer the Crimea.<sup>1</sup>

Sevastopol was the principal Soviet naval base on the Black Sea.<sup>2</sup> It was located on a peninsula extending from the southwest coast of the Crimea (PLATE XI) and had been the scene of an eleven month siege in 1854-5. Surrounded by high hills and rough, rocky terrain, it had been improved by

---

<sup>1</sup>Alexander Werth, The Year of Stalingrad (New York: Alfred A. Knopf, 1947), p. 114.

<sup>2</sup>United States Military Academy, "Operations on the Russian Front." West Point, 1948, Pt. 1, p. 62.



Soviet fortifications until it had become a powerful defensive bastion.<sup>3</sup>

On 8 November 1941 German forces pursuing remnants of the Soviet Fifty First Army made contact with the northern defenses of the city. The Russian forces, which had outdistanced their pursuers and fallen back upon Sevastopol, consisted of elements of six infantry and two cavalry divisions. These complemented a marine contingent already on site. No significant effort to take Sevastopol was made by the Germans at the time of the first encounter; their estimate of the defensive strength of the fortress indicated that a coordinated attack would be required.<sup>4</sup>

On 17 December the Germans attacked with two corps comprised of six divisions. At the time the Russian garrison was estimated by the Germans as containing four army divisions and several marine brigades.<sup>5</sup> The attack, which was intended to penetrate the treble Soviet defense lines from north and south, succeeded only in breaching the outer ring.<sup>6</sup> On 26 December other Russian activity in Crimea diverted the attention of the Germans and on 28 December the last unsuccessful attack on the fortress was made.<sup>7</sup>

---

<sup>3</sup>Friedrich Schulz, "Battle for Crimea." Heidelberg: Historical Division, United States Army, Europe, 1954, p. 13.

<sup>4</sup>Ibid., p. 7.

<sup>5</sup>Ibid., pp. 12-15.

<sup>6</sup>Ibid., pp. 15-16.

<sup>7</sup>Erich von Manstein, Lost Victories (Chicago: Henry Regnery Company, 1958), p. 226.

From the end of December until the beginning of June the German forces at Sevastopol contained the garrison. Other operations, in the Kerch Peninsula, required the forces which would otherwise have been used for a continued attack upon the city.<sup>8</sup> At times the German divisions performing the containment mission were as few as two, although some Roumanian units were also present.<sup>9</sup>

On 2 June the Germans began a five day artillery and air preparation.<sup>10</sup> This barrage was directed against supply points, lines of communication and known concentrations of Soviet reserves.<sup>11</sup> The German efforts were so effective that by the time the ground attack was undertaken the Russians were unable to provide supplies to the outer defense ring.<sup>12</sup>

On 7 June German forces in the north began the main assault. Diversionary attacks were also carried out in the east.<sup>13</sup> Opposed by a reinforced Russian garrison by now consisting of seven rifle divisions, one dismounted cavalry division and three marine brigades,<sup>14</sup> the attackers made

---

<sup>8</sup>Ibid., p. 233.

<sup>9</sup>Schulz, op. cit., p. 22.

<sup>10</sup>Ibid., p. 33.

<sup>11</sup>von Manstein, op. cit., p. 244.

<sup>12</sup>Schulz, op. cit., p. 33.

<sup>13</sup>Ibid.

<sup>14</sup>von Manstein, op. cit., p. 243.

slow progress.<sup>15</sup> It took the northern group ten days to move about four miles to their initial objective, the bay upon which Sevastopol is located.<sup>16</sup> In the meantime, the secondary attacks from the east had made some progress; heights before the city had been taken.<sup>17</sup>

On 29 June the final coordinated assault began. Elements of the northern force crossed the bay and seized terrain just to the east of the town. Forces from the east drove the Russians in their sector from the remainder of the commanding hills which overlooked Sevastopol.<sup>18</sup> The Red Army withdrew to the city and to a defense area on a peninsula to the southwest. On 1 July the attackers penetrated the city and by noon had taken it.<sup>19</sup> On 4 July the last southwestern strongpoint fell.<sup>20</sup>

The Russians attempted to hold Sevastopol for most of the same reasons that the Germans wanted to hold the Brittany Fortresses. During the early days of the siege the port remained open for use by the Red Navy. A sizable force within the citadel also posed a threat to the German forces which had conquered the rest of the Crimea.<sup>21</sup> That the

---

<sup>15</sup>Schulz, op. cit., p. 34.

<sup>16</sup>Ibid., p. 35.

<sup>17</sup>Ibid.

<sup>18</sup>Ibid., p. 36.

<sup>19</sup>Ibid., p. 37.

<sup>20</sup>Ibid.

<sup>21</sup>Werth, op. cit., pp. 113-114.

Russians intended to hold Sevastopol is shown by the efforts put into fortifications and the resupply and reinforcement which was carried out during the winter and spring between the initial and final German assaults.<sup>22</sup>

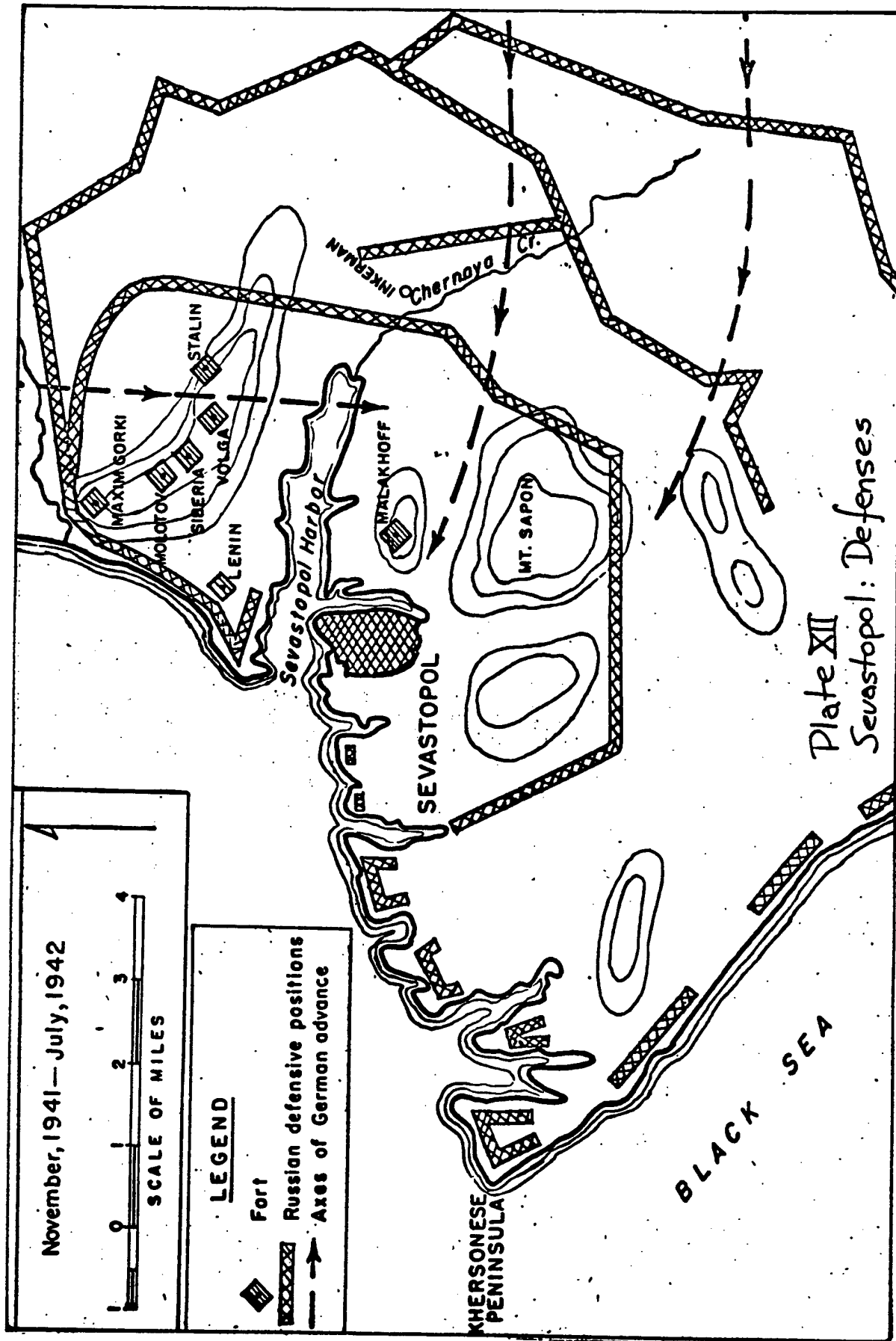
Why did the Russian defense fail? It was surely not due to faults in preparation or disposition. The barrier system (PLATE XII) consisted of three belts, essentially concentric to the city. The first of these described an arc which tied into the coast north and south of Sevastopol and was about twenty miles in length. The second belt protected the eastern approach to the city and was about eight miles long. Although it tied to the outer one at its northern extremity, the second belt was unanchored in the south. The third ring was based on high ground close to the edge of the city. Semicircular in shape, this band was about sixteen miles long.<sup>23</sup> Although Soviet dispositions are called a series of rings, the spaces between them were so closely packed with obstacles, pillboxes, and mines that the entire zone inside the outer belt could be described equally well as a single fortified area. The extent of this improvement may be judged by the fact that "over 3,000 bunkers, forts and other battle positions were taken" and that "over 120,000 mines were collected by German mine detachments."<sup>24</sup>

---

<sup>22</sup>Ibid.

<sup>23</sup>United States Military Academy, "Operations on the Russian Front," op. cit., map 10.

<sup>24</sup>Schulz, op. cit., p. 37.





Much of the fortification was designed to improve terrain which was in itself a formidable obstacle. General von Manstein, who commanded there, said that "the strength of the Sevastopol fortress consisted less in up-to-date fortifications - though a certain number of these did exist - than in the extraordinary difficulty of the ground, which was dotted with innumerable small defence installations."<sup>25</sup> As soon as the Germans had defeated Russian diversionary efforts in the Crimea, they concentrated air and artillery to close the port through which all supplies had to flow.<sup>27</sup> They used the same kind of combat power to isolate the outer defense zone from logistic installations in the interior.<sup>28</sup>

From the battle of Sevastopol it may be concluded that despite extensive preparation, strong forces, and determination, a defender cannot sustain operations without adequate logistic support. While the Soviet forces at Sevastopol could have been evacuated by sea during the early days of the campaign, they were reinforced instead. That decision cost the Russians over 100,000 troops, of which most became prisoners, and the loss of large quantities of materiel.<sup>29</sup> Whether the time bought by the defense was worth the cost cannot be determined.

---

<sup>25</sup>von Manstein, op. cit., p. 240.

<sup>26</sup>Schulz, op. cit., p. 33.

<sup>27</sup>von Manstein, op. cit., pp. 243-245.

<sup>28</sup>Schulz, op. cit., p. 33.

<sup>29</sup>Ibid., p. 37.

## The Battle for Smolensk

The battle for Smolensk is an example of a poorly executed defense. It is included here because it contrasts with other defenses, notably that of Vienna, in which essentially similar forces were used to achieve a more desirable defensive posture.

The battle for Smolensk took place in July, 1941, as the German Army drove toward Moscow in the First Russian Campaign. Located astride the Dnieper River, 170 miles southwest of the Russian capital, Smolensk (PLATE XIII) was an industrial and rail center with a population of about 156,000.<sup>30</sup> At the time of attack the city was near the point of the easternmost German penetration into the Soviet Union.<sup>31</sup>

The principal participants in the initial battle for the city were the 29th German Motorized Infantry Division and elements of the Russian Fourth Tank Army.<sup>32</sup> Documentation concerning the strength of the latter is lacking, but accounts of the battle state that both tank and infantry units were included.<sup>33</sup>

---

<sup>30</sup>Merle Fainsod, Smolensk Under Soviet Rule (Cambridge: Harvard University Press, 1958), p. 18.

<sup>31</sup>United States Military Academy, "Operations on the Russian Front," op. cit., map 3a.

<sup>32</sup>Wilhelm Thomas, "The Capture of Smolensk by the 71st Motorized Infantry Regiment on 15 July 1941." Office of the Chief Historian, European Command, 1947, p. 7.

<sup>33</sup>Ibid., pp. 10-11.

Sketch Map 11

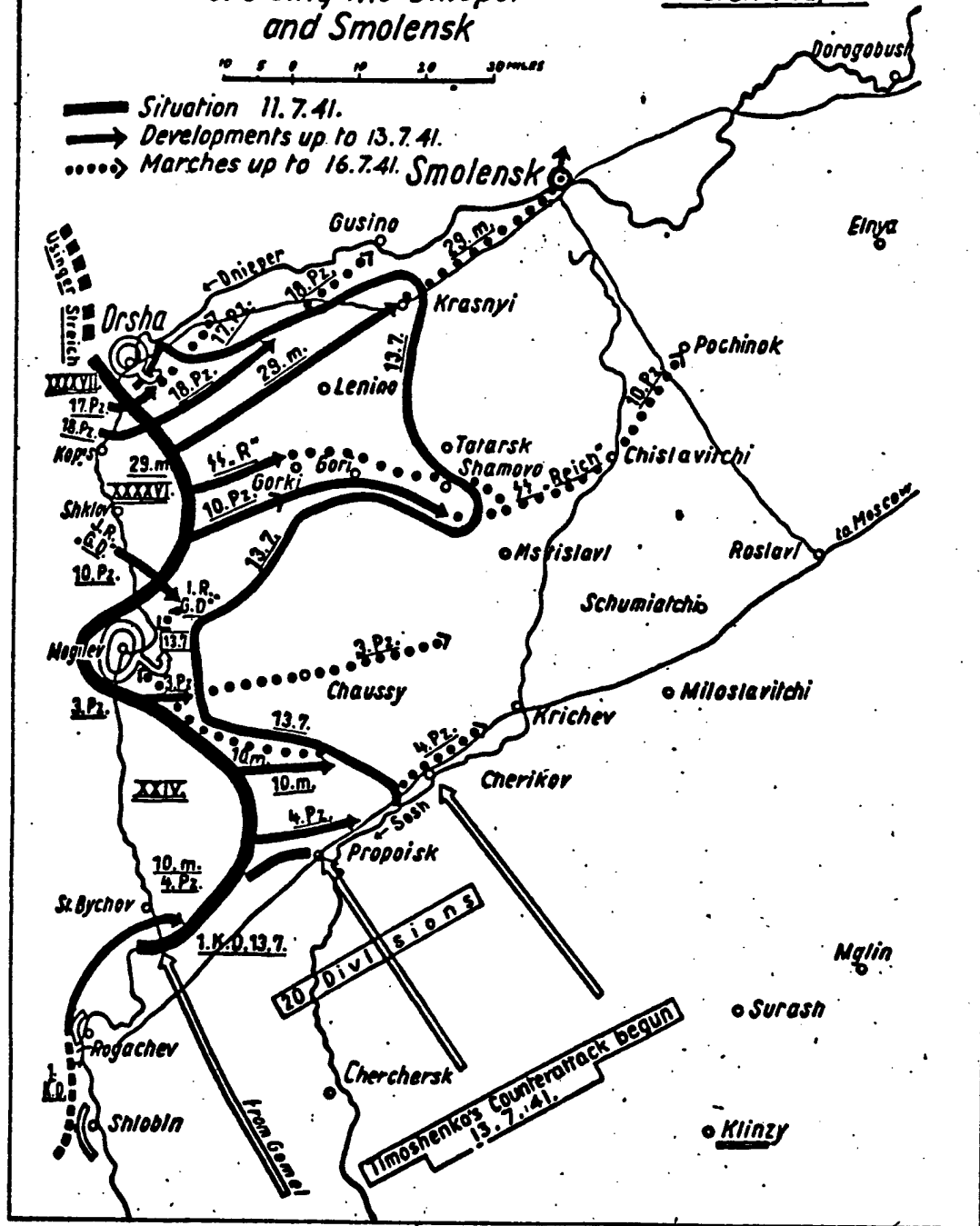


Plate XVIII Smolensk: Location and Situation

The defenders of Smolensk occupied fortified positions along the main routes from the southwest.<sup>34</sup> The attackers met strong opposition from field fortifications near most of the towns along their avenue of advance. Notable battles occurred at Krasnoye, twenty miles southwest of Smolensk and at Khokhlovo, nine miles away.<sup>35</sup> Since reconnaissance reports and statements of prisoners revealed that the main roads closer to the city were defended in a similar manner, one element of the attacking force elected to move further to the east. By this maneuver it could attack the city from the south and southeast.<sup>36</sup>

At 1700 on 15 July the leading elements of this regiment approached the southern edge of Smolensk and were taken under artillery fire by the defenders. At 2000, following a reconnaissance by motorcycle troops, two battalions assaulted the city. Describing the events of the next four hours, Wilhelm Thomas, a German officer who participated in the battle, said:

The companies were now organized into strong assault detachments and the attack on the center of the city was launched along the two main roads, running north and south.

Frightful confusion reigned in the blacked out city of Smolensk. Fleeing civilians, using every conceivable type of conveyance, pushed their way past enemy motor vehicles of all types. One assault detachment of the 3d Battalion slipped past a Russian tank

---

<sup>34</sup>United States Military Academy, "Operations on the Russian Front," op. cit., p. 25.

<sup>35</sup>Thomas, op. cit., p. 8.

<sup>36</sup>Ibid., pp. 10-11.

in the darkness and succeeded in advancing as far as the cathedral area. A few rounds from the 88-mm. antiaircraft gun cleared the streets, and produced sudden widespread panic, giving the impression that heavy German tanks had penetrated into the city.

The 2d Battalion reached the market square (Hotel Molotov) in heavy street fighting; it suffered severely from machine gun fire and hand grenades thrown from cellars and windows.

The surprised garrison of Smolensk was no longer in a position to offer organized resistance; it fled north across the Dnepr river after the part of the city nearest the Dnepr bridge started to burn.

At 2400, 15 July, both battalions reported that they had reached their initial objective, the center of the city, without suffering undue losses.<sup>37</sup>

On the following morning the Germans reached the Dnieper River's south bank and by the evening of 17 July had crossed the obstacle and had occupied all but the northernmost portion of the city. Here Russian counterattacks, artillery, and strafing halted the attack. From then until 26 July, the 29th Motorized Infantry Division, later reinforced by the 17th Panzer and 137th Infantry Divisions, held the Smolensk sector against heavy Red Army pressure from the north, east, and south. While no exact data concerning the strength of Soviet counterattacking forces is available, during this period the remnants of ten Russian divisions were encircled and destroyed just north of Smolensk.<sup>38</sup>

The defense of Smolensk was characterized by a failure of the defenders to respond decisively to the threat posed by the advancing forces. The Soviets knew that the Germans were headed for the city. The axis of advance was straight

---

<sup>37</sup>Heinz Guderian, Panzer Leader (New York: E. P. Dutton and Company, Inc., 1952), pp. 182-187.

<sup>38</sup>Thomas, op. cit., p. 13.

down the Minsk-Smolensk road. The numerous delaying actions fought by the Russians along the route must have confirmed the German intentions. When the attackers arrived at the southern edge of the city, they were engaged by Soviet artillery. From this it appears that the Russians knew not only that the Germans were coming, but the place and time of arrival.

The Russian failure was manifested in the lack of strong response to the initial penetrations and the confusion which occurred among the civilian population. The former shortcoming might be attributed to poor planning or a desire to spare the city from the damage which a defense would have provoked. The fact that the Russians shelled the town heavily for days after its capture suggests that they cared little about protecting it from harm. Poor planning or poor execution of existing plans seem to be the most likely causes of the tactical difficulty. That the Russians had heavy forces in the vicinity of the city is demonstrated by the size and length of the attempts made to recapture it. General Blumentritt of the German Army shed some light on the question when he said:

I was present at the interrogation of two high Russian officers who were captured at Smolensk. They made it clear that they were entirely in disagreement with the plans they had executed, but said that they had either to carry them out to the letter or lose their heads.<sup>39</sup>

From this it seems that a combination of unsound plans

---

<sup>39</sup>B. H. Liddell Hart, The German Generals Talk (New York: William Morrow and Company, 1948), p. 198.

and a grudging, if precise, execution of them led to the early fall of the city.

The lack of control exercised by the military over the civilian population may be attributed to the garrison's preoccupation with its own survival. At Smolensk, the Russians "anchored their power firmly on a strong military and police establishment."<sup>40</sup> When this organization was withdrawn or made ineffective the people were freed to react to the terror of the battle.

From the campaign at Smolensk it may be concluded that the defenses of a city cannot be made to depend upon the blocking of main routes of approach. More importantly, it may be observed that the defender must be alert and well organized in his use of the built up area. Lastly the mechanism for control of the population must be made to function under stress, or interference with military operations will occur.

#### The Battle for Strasbourg

The battle for Strasbourg took place in November 1944. The battle itself, while of considerable political consequence, did not involve large forces or a determined defense by the Germans.<sup>41</sup> It appears in this study because it illustrates the great complexity of organization to which the

---

<sup>40</sup>Fainsod, op. cit., p. 451.

<sup>41</sup>Dwight D. Eisenhower, Crusade in Europe (New York: Doubleday and Company, Inc., 1948), pp. 331-362.

defense of a major urban population center is susceptible.

The city of Strasbourg lies near the west bank of the Rhine River in a valley just east of the Vosges Mountains. (PLATE XIV) On 22 November, a French armored division, attacking east, had entered the town of Saverne which controlled a gap in the mountains, twenty miles from Strasbourg.<sup>42</sup> On 23 November the division struck out for the city and by 1000 had pierced the negligible German defenses and had occupied the inner town.<sup>43</sup>

The German defense forces quickly succumbed to the French attack in all areas except to the north of the city. There, in an ancient fortification called Fort Fransecky (or Fort Ney), a garrison force of about four hundred held out until 25 November.<sup>44</sup>

What accounted for this extraordinarily poor showing? First, the German Nineteenth Army, in whose zone the Strasbourg defense sector was located, could provide practically no forces for its protection. Under pressure from French and American forces the army was being forced to retire to the south of Strasbourg into what was to become the Colmar Pocket.<sup>45</sup> Second, the resources required for the erection

---

<sup>42</sup>F. W. von Mellenthin, Panzer Battles (Norman: University of Oklahoma Press, 1955), p. 332.

<sup>43</sup>Franz Vaterodt, "Preparations for the Defense of the Town of Strasbourg in the Year 1944, and the Battle for Strasbourg (23-25 November 1944)." Heidelberg: Historical Division, United States Army, Europe, 1947, p. 14.

<sup>44</sup>Ibid., p. 18.

<sup>45</sup>von Mellenthin, op. cit., p. 334.



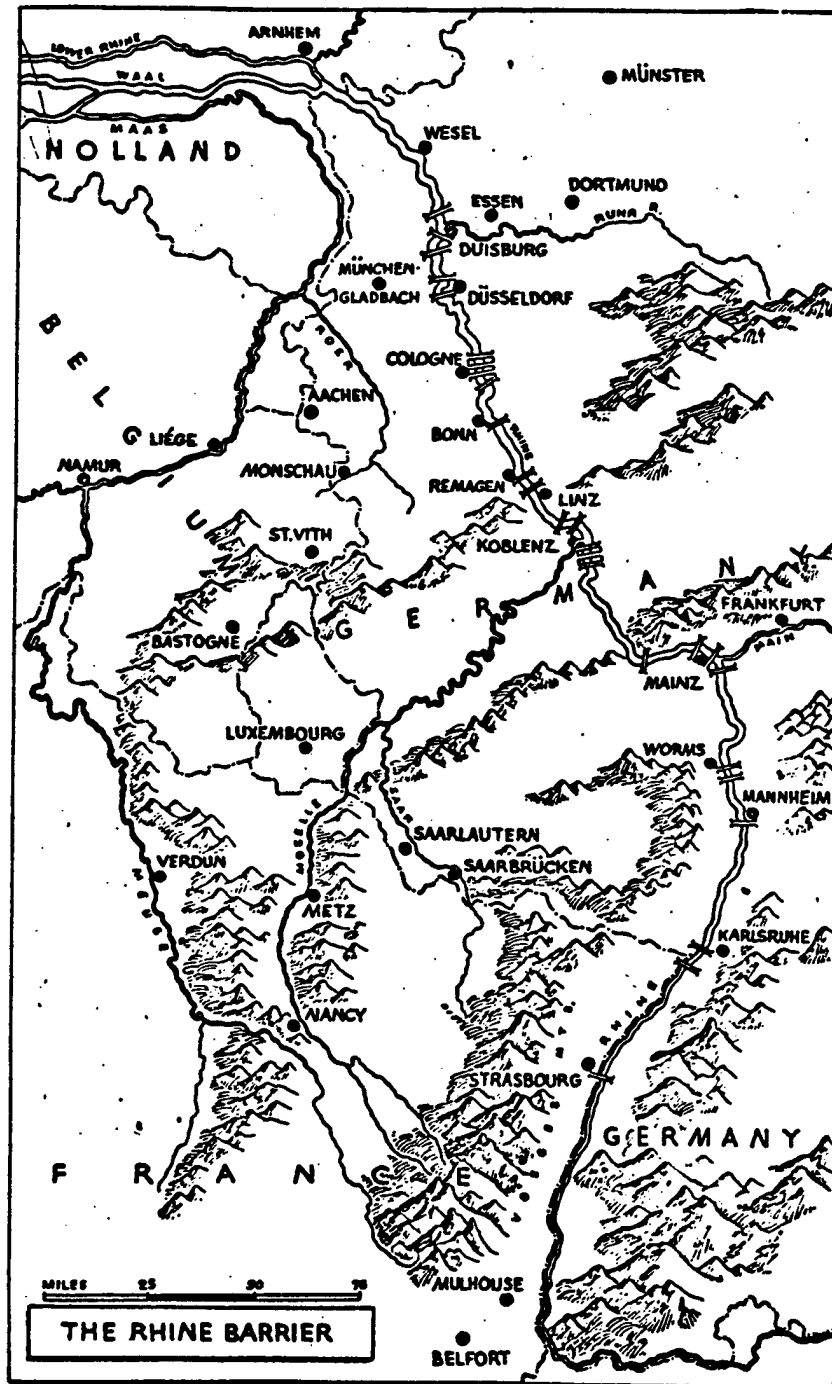


Plate XIV. Strasburg: Location

of field fortifications were extremely scarce.<sup>46</sup> Third, the overlapping of many command headquarters not only retarded the preparations for the defense but also interfered with key portions of its execution.

The total force available for the defense of Strasbourg consisted of a little more than two battalions, composed of individual companies of construction, maintenance school, veterinary, motor pool, labor, and clerical troops. They were supported by five antiaircraft batteries permanently emplaced in Strasbourg and four batteries of artillery, positioned east of the Rhine and able to cover only limited areas west of the city.<sup>47</sup> The garrison commander estimated that an adequate defense would have required one to two divisions. His requests for these had been repeatedly refused.<sup>48</sup>

The command structure for the defense of the Strasbourg area changed with tactical requirements. Until the spring of 1944 the commander of the Strasbourg region was concerned with military housekeeping duties and air defense. Then, as the Allied threat grew stronger, he was appointed combat commander of an enlarged Strasbourg area. His command excluded crossing sites and bridges in and near the city. These comprised a "Rhine Bridge Area." The combat commander was subordinate to the V Corps, with headquarters in Stuttgart. For tactical employment he was also subor-

---

<sup>46</sup>Vaterodt, op. cit., p. 4.

<sup>47</sup>Ibid., pp. 7-8.

<sup>48</sup>Ibid.

dinate to the Deputy Commander, Alsace who was the commander of a replacement training division stationed nearby. The chain of command was further complicated by intrusion of the Reich Defense Commissioner whose duties included civilian administration in Alsace. A fourth headquarters was involved because the Rhine Bridge Area was controlled by the Commander of Upper Rhine Fortifications.<sup>49</sup>

In the summer of 1944 the confusion was heightened by a new division of the Strasbourg area. Nineteenth Army assumed control of most of the old region. The city of Strasbourg and the Rhine crossings remained under their original subordination, however. While the rearrangement was being effected, the combat commander discovered that Fortress Headquarters II, from Heidelberg, a subordinate of the Commander of Upper Rhine Fortifications, had been ordered to construct a twenty five mile long set of field fortifications around Strasbourg.<sup>50</sup>

The problem was not solved until 21 November, on which date Army Group G, Nineteenth Army's higher headquarters, assumed command of the entire area. Even that was a mixed blessing for the combat commander; he found himself subordinate to a sector commander newly appointed by the group.<sup>51</sup>

There were tangible results of these organizational shortcomings. The weakness of the garrison was due in part

---

<sup>49</sup>Ibid., pp. 2-3.

<sup>50</sup>Ibid.

<sup>51</sup>Ibid., p. 12.

to the preoccupation of V Corps with routine administrative affairs.<sup>52</sup> Three bridges, although prepared for demolition, were not destroyed because V Corps had required the commander to await approval by a written demolition order.<sup>53</sup> Even the construction of the field works was not coordinated by the combat commander; he had no authority over the erecting agency.

Two other points of interest concerning the defense were the status of the city and the handling of civilians. Strasbourg was neither declared an open city nor a fortress. It was considered a bridgehead, to be defended to cover the withdrawal of forces to the east.<sup>54</sup>

The evacuation of the city by the populace was forbidden. A large segment of that group consisted of Germans who had moved into the region since the fall of France in 1940. Any withdrawal on their part was felt to be defeatism and strong measures to prevent movement were taken.<sup>55</sup>

From the battle of Strasbourg it may be observed that fast moving tactical situations make complex defense organizations ineffective. It can also be determined that the rear area status of a major urban population center may detract from defense preparations and may engender a multiplicity of control agencies whose coordination in time of

---

<sup>52</sup>Ibid., p. 19.

<sup>53</sup>Ibid., p. 9.

<sup>54</sup>Ibid., p. 6.

<sup>55</sup>Ibid.

crisis may be difficult to achieve. The command problems at Strasbourg were not unique; they were common to many of the German static defense systems.<sup>56</sup>

### The Battle for Vienna

The battle for Vienna was a routine defense of a key center. It is included in this study because it demonstrates the threats to which an urban population center may be subjected and because it shows the extent to which its defense may be controlled. The performance of paramilitary and alert forces is also noteworthy.

The battle for Vienna took place in April, 1945. Like the later battle for Berlin, it was ordered by Hitler<sup>57</sup> and was characterized, at least in part, by important political and moral motives.<sup>58</sup> Although the Germans recognized the imminence of a Soviet drive on Vienna as early as 7 February,<sup>59</sup> they were unable to assemble forces strong enough to cope with the threat.<sup>60</sup>

The city of Vienna lies on the west bank of the Danube

<sup>56</sup>Bodo Zimmermann, "OB WEST, Atlantic Wall to Siegfried Line, A Study in Command." Historical Division, European Command, 1946, pp. 6-7.

<sup>57</sup>Percy Ernst Schramm, "The German Wehrmacht in the Last Days of the War." Heidelberg: Historical Division, United States Army, Europe, n.d., Pt. II, p. 560.

<sup>58</sup>Rudolf von Buena, "The Defense of Vienna (29 March-16 April, 1945)." Heidelberg: Historical Division, United States Army, Europe, 1954, p. 6.

<sup>59</sup>Schramm, op. cit., p. 470.

<sup>60</sup>von Buena, op. cit., p. 5.

River where it flows in a southeasterly direction. (PLATE XV) Part of the city is an island, formed by the Danube and a canal, roughly parallel to the river, and located to the west of it.

The commander of the garrison of Vienna was General der Infanterie Rudolf von Buenau. Although specifically selected by the Wehrmacht, General von Buenau was not given control of the field forces required for the defense or of the civilian resources available in the city. These were controlled by the Sixth SS Panzer Army, under SS Oberstgruppenfuehrer Dietrich and Reich Defense Commissioner von Schirach, respectively.<sup>61</sup>

General von Buenau, who assumed command on 3 April, felt that the city could not be held. Nevertheless, he set about organizing a defense based upon the use of administrative personnel, police, Volkssturm,<sup>62</sup> and those field forces which had ultimately been dispatched from the II SS Panzer Corps, a part of the Sixth SS Panzer Army. The latter forces included the 6th Panzer Division, the Fuehrer Grenadier Division, the 2d SS Panzer Division, and the 3d Panzer Division.<sup>63</sup>

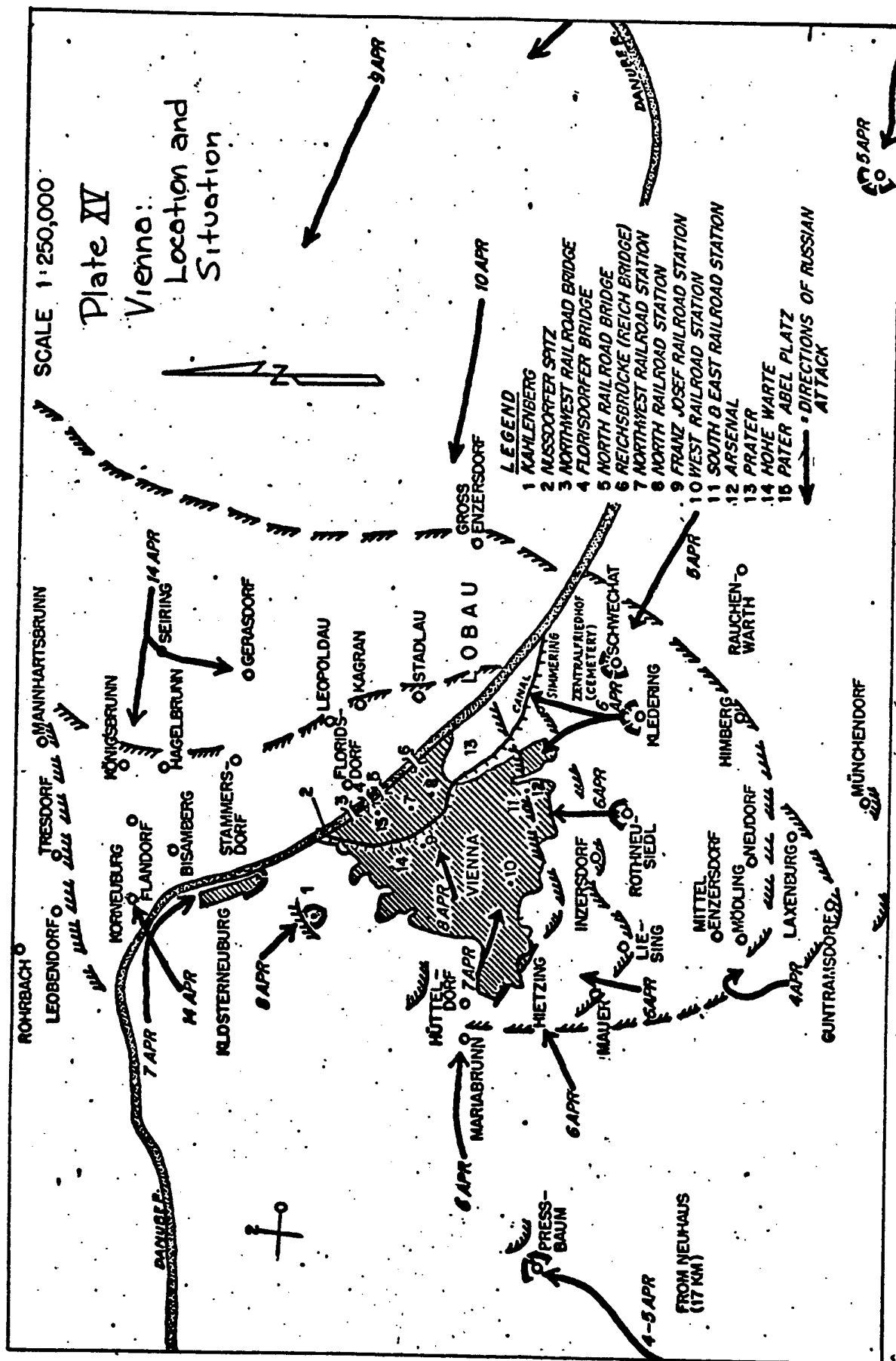
The Russian scheme of maneuver was simple. Soviet forces to the south of the city continued past it to the

---

<sup>61</sup>Ibid., pp. 2-6.

<sup>62</sup>Ibid., pp. 5-7.

<sup>63</sup>Ibid., p. 37.



west and then turned north to the Danube.<sup>64</sup> Vienna was then hemmed between the circle of Red troops to the south and west and the Danube to the north and east. Although the Soviets were present in strength east of the Danube, they made no serious attempt to encircle the city from that side until the battle had been decided.

The German response, limited by insufficient combat power and time, was a series of unprepared lines, concentric to Vienna and west of the river. On 4 April the line was, at its furthest point, about nine miles from the center of the city. The 2d SS, 3d SS and 6th Panzer Divisions were on line, holding the southern portion, and alert and Volkssturm troops, including a Hitler Youth Battalion, held the west.<sup>65</sup> By 6 April, under pressure of attacks from both south and west, the defending forces withdrew to a new line along the edge of the city on the south and about three miles before it on the west.<sup>66</sup>

By 7 April the Russians had reached the Danube northwest of Vienna and now concentrated upon the reduction of the city. Despite commitment of the Fuehrer Grenadier Division, a full strength unit, the Russians continued their advance.<sup>67</sup> By 9 April the Germans held only a narrow bridge-

---

<sup>64</sup>W. E. D. Allen and Paul Muratoff, The Russian Campaigns of 1944-45 (Harmondsworth, Middlesex, England: Penguin Books, 1946), p. 303.

<sup>65</sup>von Buenau, op. cit., pp. 12-15.

<sup>66</sup>Ibid., p. 16.

<sup>67</sup>Ibid., p. 17.



head west of the canal. Soviet attacks forced them to relinquish that holding on the night of 9-10 April, and a new line, behind the canal was established. The withdrawals were effected in good order and all bridges were destroyed.<sup>68</sup>

From 10 through 13 April the pressure of Russian attacks to the north and west of the city began to be felt and direct assaults across the canal reduced the German area west of the Danube to small pockets of resistance before the remaining bridges over the Danube. On the night of 13 April the last elements of the 2d SS Panzer Division withdrew across the Danube. The city had been lost.<sup>69</sup>

The battle for Vienna demonstrated the need for highly trained troops in the defense of major urban population centers. In an appraisal of the fighting qualities of the elements involved, General Buenau rated the combat effectiveness of the regular divisions, alert units made up of school troops, and the Hitler Youth Battalion as good or better. Other alert units, from the police, constabulary and local Volkssturm (excluding the Hitler Youth) were poor. The defense forces which were composed of local patrol elements were found to be unreliable "as command belonged to the Austrian resistance movement."<sup>70</sup>

---

<sup>68</sup>Ibid., p. 20.

<sup>69</sup>Ibid., p. 26.

<sup>70</sup>Ibid., p. 41.

While the Germans had occupied the city for some time and presumably knew its terrain, the Russians probably were "directed occasionally by inhabitants of the city and perhaps even by guides who were adherents of the resistance movement."<sup>71</sup> Ineffective organization of the civil control system may have contributed to this counter intelligence failing.<sup>72</sup>

Vienna again showed the defensive value of an unprepared urban population center. Though no field fortifications were available to assist the defenders, they held the attackers in the city for a week. Similar forces had been unable to hold the attackers forward of the city for more than two days. Despite a lack of signal equipment, the defenders had been able to fight a coordinated action of which planned and well executed delay was a vital feature.

The entire contest for the city was flavored by its location and status. Although its defense had been ordered by Hitler, no real attempt was made to hold it indefinitely. That this was tolerated by the Wehrmacht was probably due to a realization of the futility of such a defense, and the salient fact that Vienna was an occupied, rather than a German, city. German attempts to hold cities "to the end" had often resulted in annihilation or capture of the forces involved. The battle for Vienna resulted in the delay of

---

<sup>71</sup>Ibid., p. 31.

<sup>72</sup>Ibid., p. 8.

the Soviet drive for about ten days without the loss of integrity of the regular elements of the defense.

## CHAPTER VI

### EVALUATION AND DERIVATION OF PERSONNEL, LOGISTICS, CIVIL AFFAIRS, AND INTELLIGENCE DOCTRINE

This chapter, and the one following, present an evaluation of the information presented in previous chapters and develop doctrine based upon conclusions drawn from that evaluation. In many instances the plans of the defenders went awry; what was intended to happen did not occur. The chapters are more concerned with the actual events than with the plans. It is felt that this approach enables the delineation of doctrines of practice rather than of theory and the preparation of proposals more likely to be of use in the field.

The success of an entire operation is not considered the sole determinant of the merits of every portion of the defense scheme. For example, the rather callous handling of civilians by the Russians at Stalingrad did not prevent them from winning the battle. Nevertheless, other methods might have been better.

The doctrine developed by this paper is for use of the United States Army, now and in the future. Techniques are examined in that light. Methods which are suspect because they conflict with other, more basic doctrine or would be

repugnant to the nation cannot readily be adopted.

### Personnel

The characteristics of the defending force are determined in large measure by the manpower available. There are three components of this resource: troops, local paramilitary units, and civilians. The major urban population center is a source of the latter two.

In all of the battles which were examined the performance of trained, regular forces was at least creditable. At Strasbourg the absence of all but a few regulars contributed to the early loss of the city but the longer retention of Fort Fransecki. Even at Smolensk, where the initial German drive rapidly dislodged the defenders, the retiring forces were able to regroup and hold the attackers in the northern portion of the city. At Stalingrad, Berlin, and Vienna the principal requirement was for personnel capable of street fighting. At Aachen the defense hinged upon more conventional employment. Brittany and Sevastopol illustrated the use of soldiers in highly developed fortifications. The adaptability required of troops engaged in the defense of major urban population centers cannot be gained by brief schooling or part-time drill. Training and experience alone give the ability to maneuver successfully in open terrain and to survive brutal, small unit actions in the city itself. In his monograph, "Defense," General Guenther Blumentritt, once Chief of Staff, West, of the German Army, summed up the

troop requirement as follows:

"This kind of combat requires excellent troops. It would be impossible to attempt such fighting with militia, old men, or second class troops."<sup>1</sup>

The special skills required by fighting in cities are not readily learned in training. Well trained troops, however familiar with more normal combat, could profit from the specialized experiences of those among them who had actually engaged in protracted house-to-house engagements. The Russians fighting at Stalingrad discovered that the skillful soldiers survived to teach the newly arrived and less proficient replacements. The identification and assignment of experienced cadremen to elements designated for the defense of a major urban population center would be a concrete step toward practical combat training and immediate improvement of unit proficiency.

The fact that paramilitary forces often exist in a major urban population center can be used to advantage by the defending commander. If the burden of active combat must fall upon the regular troops available, then everything possible should be done to free them from routine, administrative duties. For the most part, paramilitary forces should be considered as nonessential adjuncts to the regular forces and assigned missions in that light. The philosophy of the employment of guerillas would appear to be equally

---

<sup>1</sup>Guenther Blumentritt, "Defense." Office of the Chief Historian, European Command, n.d., p. 23.

applicable to alert forces, police, and local militia. Specific functions for which paramilitary forces appear best suited are the safeguarding of rear installations, performance of logistic tasks, and control of any remaining portions of the civilian population. Should circumstances so demand, they might less desirably be employed as economy of force elements in inactive sectors or as garrisons for lesser fortifications. Organized, workers battalions contributed significantly to the Soviet supply effort at Stalingrad and militia and administrative troops formed part of the fighting garrisons at Aachen and Brittany. Although their use was at least partially successful, the extremely poor performance of other such units at Berlin, Strasbourg, and Vienna points up the hazard in counting upon them for actions critical to the defense. The expected level of paramilitary force performance is well illustrated by the actions of the Volkssturm in Berlin. Of it, Colonel Willemer said:

Against the well equipped and battle-trying troops of the Red Army, the combat value of the battalions remaining in Berlin was almost nil, in spite of the will that was frequently present. This does not mean that detachments of Volkssturm men did not in many instances put up a gallant fight. When it came time for serious fighting, however, the bulk of the Volkssturm simply stayed at home. In some cases entire unarmed battalions were dismissed by clearsighted military commanders. However, in places where the Russians attacked either feebly or not at all Volkssturm units were able to occupy a sector or delay the enemy advance for some days.<sup>2</sup>

---

<sup>2</sup>Wilhelm Willemer, "The German Defense of Berlin." Heidelberg: Historical Division, United States Army, Europe, 1953, p. 42.

The final manpower resource available to the defending force is the civilian population. The extent to which the people may be used to assist the defense is governed by the laws of land warfare, the location of the population center, the degree to which the center has been evacuated, and the availability of personnel not engaged in other war work. Mobilization of the civilian population at Stalingrad produced some important contributions to the defense. A similar effort at Berlin did not produce the desired results because many of the potential laborers were otherwise engaged; at Aachen the outcome was similar because organization failed. Depending upon the circumstance listed above, the civilian population can be used to construct field fortifications, perform logistic services, act as technical advisors concerning the intricacies of the city and its vital public works, and provide medical services to casualties within its own numbers. Use of civilians in combat activities is subject to the same limitations that apply to paramilitary forces and, more importantly, to limitations imposed by the Geneva Conventions.

Unless the garrison of a major urban population center has had a long and intimate association with the community, it will be handicapped in its defense by lack of familiarity with the area. The employment of local nationals as interpreters or guides permits the rapid acquisition of the missing skills or knowledge. Russian use of disaffected personnel at Vienna proved to be profitable. Similar arrange-



ments proved successful when tried by United States forces in Korea. Temporary integration of indigenous personnel, as individuals, should be considered and implemented if desirable under the circumstances and if permissible under the laws of land warfare.

Since the availability of trained troops is one of the keys to a successful defense, the problem of replacements becomes a matter of paramount importance. The number of new troops which may be delivered to the defending forces depends upon the operational intent of the defense, the availability of reserves, and the ability of the transportation system to carry them. At both Aachen and Stalingrad the replacements made available were limited by artificial control. The Russians at Stalingrad wanted to limit the size of the conflict and at the same time provide troops to be used elsewhere in an anticipated counteroffensive. The German high command, although hard pressed to provide the forces needed to hold Aachen, held back a number of divisions for use in the Ardennes offensive. In the battle of Vienna the input to the defense was limited simply by lack of troops. At Sevastopol, late in the siege, and in Brittany, no routes were open over which replacements could be delivered. Since the defense is a circumstance most often brought about by an inferiority of friendly combat power, the shortage of replacements for whatever reason is a situation to be anticipated and, of necessity, accepted. While perhaps an extreme example of what may be expected with regard to replacements,

the situation that existed during the battle for Aachen illustrates the problem. Of it, General Schack said:

Replacements were entirely insufficient. They did not total a twelfth part of the casualties. Therefore efficient divisions, who had begun at war strength, lost combat effectiveness at a surprisingly rapid rate.<sup>3</sup>

The casualty rate in the defense of a major urban population center varies with the nature of the conflict. If the active portion of the defense is carried out within the center, as it was at Stalingrad, heavy, steady attrition can be expected. If the main battle occurs outside the city, loss rates associated with more ordinary types of defense can be anticipated. Such losses in the Aachen campaign were characterized as "considerable" by the German commanders involved.

Actual battle casualties do not comprise the majority of losses in all cases. Where the defending force is encircled and unable to withdraw, the losses from ultimate capture or effective imprisonment may exceed the killed and wounded. Sevastopol and Lorient are examples of this circumstance.

The battles for Stalingrad, Aachen, and Berlin illustrated three different levels of morale which may be found in units defending major urban population centers. Morale was apparently established by the training of the troops,

---

<sup>3</sup>Friedrich Schack, "LXXXI Corps (4-21 September 1944)." Heidelberg: Historical Division, United States Army, Europe, n.d., pp. 46-47.

their feelings concerning the probable outcome of the battle, and their combat experiences prior to the engagement. Thus, at Stalingrad, the Russians' spirit improved as the battle progressed. At Aachen the troop morale was mediocre; while continuing to fight competently after the encirclement of the city, both commanders and men had little liking for the continuation of the effort. At Berlin, even experienced, well trained units fled from the advancing Russians.

The most serious detriments to morale produced by the defense of an urban population center appear to be the individual isolation often found in house-to-house fighting and the unit isolation caused by encirclement. Antidotes must be the establishment of self-reliance in the soldier and confidence of ultimate success in the commander.

From the foregoing the essential elements of doctrine concerning personnel involved in the defense of major urban population centers may be deduced.

The center may provide manpower which adds to available troop strength. All such personnel may be used to assist in the defense but well trained, experienced soldiers must be used to carry out active operational assignments. If a protracted defense is anticipated, the identification and assignment of cadremen experienced in city combat will improve the skill level of units employed in the operation. Paramilitary forces may be used as auxiliary control elements and for other, non-critical tactical and logistic tasks. Civilians may be used within limits defined by the

laws of land warfare; construction and service activities are the most suitable fields of employment for them. Both paramilitary and civilian personnel should be considered for individual employment as guides of interpreters for companies and larger units. Casualties will be high and replacements restricted in number. The most careful use of trained troop strength must be made. Morale will pose serious problems; action must be taken to improve the competence of the individual soldier and to avoid feelings of hopelessness and defeat engendered by the peculiar characteristics of the defense.

### Logistics

Regardless of the troop strength available to the commander, he cannot direct a sustained defense unless supplies and the means to deliver them are similarly at hand. The extent to which logistic support will be furnished is determined by the same factors as govern the other allocations of combat power. The operational intent of the defense, the gross availability of resources, and the presence of mass transportation media all influence the quantity and nature of materiel and services devoted to the battle. At Stalingrad the delivery of supplies was constant throughout the course of the conflict. At Aachen the rate of materiel delivery was relatively low due to a combination of inadequate transport, higher priority demands from other operations, and lack of national inventory. The German forces defending Vienna

received little materiel because there was none to be had. During the battles for the fortresses in Brittany and Sevastopol all significant supply came from stocks on hand.

The defense of major urban population centers differs from the more general defense of undistinguished terrain. The peculiar value of a center makes its defense more predictable than the protection of a less populous or important place. From this it may be observed that some logistic preparations, made in advance of a defensive battle, could be justified. At Sevastopol and Brittany, considerable construction effort and stockpiling occurred long before an offensive threat developed. The West Wall at Aachen represented such preparations fallen into disrepair; stockpiles of materiel needed to refurbish existing fortifications or to conduct an active defense were negligible. At Berlin, some efforts to accumulate material for a prolonged engagement were made, but at Strasbourg and Vienna, where lengthy defenses were either not expected or not planned, virtually no logistic preparations were made.

Stockpiling presents several difficulties. It is often difficult to predict the materiel which will be required. Rations and barrier material will almost always be needed, but what kinds and calibers of munitions will be required? The experience at Berlin showed that the variety of weapons in the hands of troops may not correspond to ammunition in storage. Materiel left in depots or on site is subject to loss through deterioration or pilferage. Aachen is

a fair example of the latter circumstance. Finally, accumulation of large stores earmarked for use in the defense of a center is in competition with the flow of similar supplies to active operations.

It appears that stockpiling should take place, but on a phased basis. Commodities not usually considered difficult to obtain, such as rations and medical supplies, could reasonably be stored long before an anticipated battle. As a threat develops, material required for advance defensive preparations, such as barrier material and demolitions, should be accumulated. When the threat becomes well defined and the units likely to defend become identifiable, action to obtain stocks of ammunition and fuel should be taken. The proposed scheme would assure the defense force of adequate supplies on site without unduly restricting availability of materiel prior to the battle or developing an inviting target solely on the basis of contingency planning.

Some commodities, such as water and bulk fuel, are difficult to stockpile due to their volume. Where delivery means are subject to disruption, preparations for the defense should include provision of alternate supply systems. The water system in Berlin was made inoperative early in the battle but adequate supplies could be drawn from rivers and wells. Similar measures, including provision of emergency pipeline or rail terminal facilities, may be taken to assure uninterrupted supply of bulk materials.

The service of transportation is an extremely important

part of logistic operations. More than any other aspect, it is subject to direct influence by the tactical circumstances of the defense. The enemy will try to interdict routes of supply. His degree of success determines the rate at which available supplies can be delivered to their users. The battle of Aachen illustrates the use of the common techniques of interdiction. First air and artillery were used to destroy rolling stock and harass terminal points and communication routes. Later the same routes were cut by ground maneuver. The Germans at Sevastopol first isolated the fortress by land action, then cut sea routes by use of air power, and finally prevented the movement of supplies within the fortress by accurate, observed fire on the interior delivery lines.

Encirclement appears to be the only enemy tactic which guarantees absolute severance of the ground transportation system. The Soviet defense of Stalingrad showed that adequate flows of supplies can be maintained under extremely difficult conditions. When, later in battle, it was the Sixth German Army under siege, ground encirclement terminated the conflict rather quickly. The German failure to mount an adequate airlift does not, by itself, indicate that such a technique must always fail. But restricted landing areas within the encirclement and the likelihood that the attacker will control the air both tend to indicate that airlift alone would not be able to maintain an adequate supply level for a major force.

The effects of transportation failure may be immediately felt or may take some time to influence the course of an engagement. The size of local materiel reserves and the intensity of conflict bear heavily upon the matter. At Aachen, where stockpiles were small and fighting heavy, the defenders were immediately and constantly plagued by supply shortages. At Sevastopol, where large quantities of materiel were on hand, shortages were not felt until late in the heavy fighting. At Lorient, which had been prepared for siege years before, the failure of the Americans to attack permitted the garrison to enjoy a satisfactory supply status.

What can be done to preserve an adequate transportation system? Maintenance of control of the air would be desirable but uncertain in the face of presumably superior enemy combat power. Adequate antiaircraft protection, the use of multiple modes and routes of transport, effective damage control and rapid repair of routes, and operation during periods of reduced visibility offer the best solutions to the problem of interdiction by air or artillery. In addition to the highly developed commercial transportation complexes which are common to major urban population centers, other features of the centers and their defense add to the transportation capability. Since movements within the center are restricted, units involved in defense of the city proper may be able to release organic equipment for use in the total logistic effort. Private vehicles may be requisitioned to bolster the military inventory. Under some



circumstances boats, wagons, and pack animals may be similarly employed. The successful defense of Stalingrad hinged on the provision of supplies carried by very large numbers of non-military conveyances.

If the enemy achieves permanent encirclement, very little can be done. Aerial resupply in the face of assumed enemy control of the air would be costly and probably ineffective. Only a rupture of the encircling ring can reasonably be expected to bring about a satisfactory improvement in the transportation situation.

The construction of fortifications is a logistic function which may be enhanced by the availability of local labor. Fortifications may be erected well in advance of the battle but proper planning is required to insure that best use is made of the resources expended. From the battles studied it may be observed that: defensive works have often influenced the scheme of maneuver; expensive and elaborate forts are apparently not significantly superior to field fortifications; failure to fortify on all avenues of approach negates the value of works on selected avenues; provision of covered routes of approach from the interior is an important part of terrain improvement; and some preparation within the center may be advantageous. At Aachen the defenders observed that the West Wall represented a great deal of wasted effort because it had been allowed to deteriorate and because the weapons for which it had been designed had been superseded by materiel of different config-

uration. Of the matter General Koechling said:

The numerous antitank areas in the form of anti-tank obstacles, antitank ditches and over 200 fortress 8,8 cm antitank guns, partly installed on the concrete pedestals with armored cupolas, build up to the west and to the east of the Roer with an immense employment of materiel and being very expensive, have stand the test by no means . . . . .

Opposite the highly expensive permanent fortifications, being always overhauled by the technique, etc, quickly, the field fortification has proved to be an excellent one. The simple, camouflaged foxhole has been quite sufficiently in behalf of the battle itself; however being enough for the mobile battle, one cannot renounce from the enlargement of it, when the defense battle lasts a long time -- already by reasons of shelter for the man -- to a system of trenches echeloned in depth with obstacles.<sup>4</sup>

General von Manstein expressed similar convictions about the Soviet defenses at Sevastopol. It was there that the need for covered approaches from supply point to fortification was also demonstrated.

The battle for Smolensk illustrated the need for coverage of all avenues of approach; the initial German success there was due in large part to the absence of works in the southeast of the city.

The value of the center itself, as a fortification, was shown wherever a decisive battle took place within its confines. The built up area is an excellent obstacle, but the Russians at Stalingrad showed that it can be improved by specialized construction effort.

Field fortifications, organized in great depth and

---

<sup>4</sup>Friedrich Koechling, "The Battle of the Aachen Sector (September-November 1944)." Heidelberg: Historical Division, United States Army, Europe, 1945, p. 31.

covering all avenues of approach, should constitute the primary aim of an ideal construction effort. Cover to supply routes and preparations of strongpoints within the center must also be considered.

The essential elements of doctrine concerning the logistic support of the defense of a major population center are summarized as follows:

The defense cannot be sustained unless supplies are always available to the defenders. Supply may be assured by stockpiling and maintenance of input throughout the battle. Limited stockpiling, first of food and medical supplies, then of barrier materials, and lastly of fuel and ammunition, will be of most benefit to all forces conducting defensive operations. Provision of emergency systems to assure uninterrupted delivery of bulk fuel and water should be undertaken as part of the preparation for the defense. Input can be maintained in the face of enemy interdiction by artillery and air, but will be effectively terminated by ground encirclement. Operations under the cover of reduced visibility and the use of multiple routes and modes of communication are mandatory during enemy interdiction action. Use of requisitioned civilian transport and vehicles organic to units engaged within the center should be considered. Construction, if undertaken, should be coordinated with anticipated schemes of maneuver and should provide field fortifications in depth covering all avenues of approach and strengthening the obstacle presented by the city.

\*

The basic philosophy concerning logistics in the defense of a major urban population center does not differ from that expressed for more ordinary circumstances. FM 100-5 states:

The capabilities and limitations of administrative support activities have a direct influence on and are closely interrelated with strategy and tactics. The commander of any force must balance and integrate the force operations with its administrative support to accomplish his mission. He must insure that his actions are planned and executed within administrative support capabilities.<sup>5</sup>

### Civil Affairs

The large civilian population of major centers is one of the factors which make them unique. The manpower in the community can be made to hinder or help its defense; its use must be of concern to the military commander involved.

Control of the populace depends upon the country in which the center is located, the agencies available for control, and the philosophy of use propounded by both military and political authorities concerned. In enemy territory the nature and degree of control exercised over the population may be directed by the military. The law of land warfare is the only real limitation placed upon the occupying force. In friendly countries or in the United States or its territories, control exercised by the military is subject to approval of the local or national government. Any

---

<sup>5</sup>U.S., Department of the Army, Department of the Army Field Manual FM 100-5 Field Service Regulations - Operations (Washington: Department of the Army, 1962), p. 163.

doctrine involving civil affairs must recognize these facts and must stem from a blend of military and humane considerations.

One way in which control requirements may be reduced is by evacuation. At Aachen civilians were forcibly removed from the city. At Berlin and Stalingrad personnel without important tasks in the community were permitted to leave. No assistance was furnished by the defenders, however. The French citizens of the Brittany Fortresses were permitted to depart without restriction, but the civilian population of Strasbourg was forced to remain in place. That masses of civilians can hinder military operations was demonstrated at Aachen, prior to the evacuation, and at Smolensk. That civilians may suffer when left to their own devices was illustrated at Stalingrad and to some degree at Berlin. Current United States Army doctrine is expressed in FM 41-10 as follows:

Whenever possible, the rearward evacuation of communities in forward combat or other areas is avoided. Evacuation removes civilians from areas where they can maintain themselves, provides material for enemy propaganda, arouses resentment, affords civilians an opportunity to observe valuable military installations, complicates the control of their movements, increases the difficulties of maintaining adequate security; necessitates the use of military transport and the expenditure of additional food, fuel, clothing and medical supplies, thereby increasing the burden upon military resources, and may create epidemic conditions and decrease availability of facilities to support military operations . . . .

If tactical considerations so require, civilians may be removed from forward areas and not permitted to return to their homes until the advance of friendly elements has resulted in the establishment of a new forward zone. The removal of civilians may be partial

or complete, as security considerations require. . . .<sup>6</sup>

The quoted doctrine apparently does not consider the situation in which evacuation can be planned and executed before combat forces become involved. The predictability of defense of a major urban population center offers an opportunity for this to be accomplished.

If a center is to be strongly defended, evacuation has many advantages. It would reduce the logistic burden on those agencies supporting the military operations in the center. It would reduce the hazard of civilian interference with military activities. It would probably reduce the loss of life among the civilians. It would place the care of the population in the hands of agencies not immediately concerned with active combat.

By anticipating the need for evacuation before a major threat develops, authorities may plan and initiate a phased movement. Based upon both military and humane considerations, the phasing should require the evacuation of the women, children, and very old, first. These population groups contribute least to whatever defense efforts are in progress. The second phase should cover most able-bodied males and would occur after most of the defense preparations have been completed. The third phase, which might never take place, should cover paramilitary forces and specialists and technicians who had been kept in place to control the

---

<sup>6</sup>U.S., Department of the Army, Department of the Army Field Manual FM 41-10 Civil Affairs Operations (Washington: Department of the Army, 1962), pp. 129-130.

rest of the population or operate vital industries.

If such an evacuation is executed properly, all personnel in the first phase and many in the second would be evacuated before transportation requirements become critical, before the military becomes responsible for the provision of supplies and services, and while civilian, rather than military, control can be exercised.

The foregoing scheme may be impossible of achievement, either because of a reluctance on the part of authorities to implement it or because of rapid development of the tactical situation. Nevertheless it appears to be sound in conception and an acceptably realistic objective for civil affairs activities.

The primary lesson learned from the battles was that unless close cooperation exists between civilian and military agencies, maximum use of the manpower available cannot be obtained. If both factions are subordinate to a single national agency, expeditious action to resolve disputes can and should be taken. Decisions generated by such actions must be wholeheartedly supported by all agencies concerned. Where military and civilian agencies are not subordinate to the same authority, as where a guest-host relationship exists, sufficient time must be allocated to assure that delicate negotiations on either local or national levels can be satisfactorily completed.

The essential elements of doctrine concerning civil affairs in the defense of major urban population centers may

be stated as follows:

The center's population is a commodity which may be used to the advantage or detriment of military operations. Active control by coordinated agencies is essential to assure usefulness. If possible, at least partial evacuation should be accomplished prior to the onset of active defense operations. Policy concerning civilians may be generated by the military or by governmental agencies. Determination of a clear policy should be accomplished early and the policy should be supported by all agencies involved.

A succinct statement of worthwhile objectives in civil affairs activities appears in Colonel Willemer's conclusions concerning the battle for Berlin:

It is expedient to evacuate the mass of the population, although a sufficient working force must remain behind to carry on such vital activities as supply, the clearing of rubble, and the operation of workshops and industrial enterprises. This part of the population must be subordinated to the defense commander. Provision should be made to give the population psychological guidance.<sup>7</sup>

### Intelligence

The use of resources in the defense of major urban population centers is governed by operational plans. The plans consider available combat power and the capabilities of the enemy. Intelligence contributes to the knowledge of both considerations.

The predictability of defense of a center assists in

---

<sup>7</sup>Willemer, op. cit., p. 53.



the collection of what might be termed "pre-battle intelligence." This is processed information concerning the structure of the center, the terrain surrounding it, and the nature of manmade works available for its protection. Sources of pre-battle intelligence include personal knowledge held by indigenous personnel, maps, and public and private documents dealing with the surface configuration of the center and with distribution systems which use tunnels and similar hidden routes. Intimate knowledge of the utilities and public works systems aids both the active defense and its logistic support. The tunnels of Berlin were used most effectively in the defense of that city. It is essential that pre-battle intelligence be developed in great detail and that it be disseminated to the forces which will defend the center. In places where considerable effort was expended in the construction of permanent fortifications, detailed terrain analysis was accomplished as a matter of course. The defense of Aachen, Berlin, the Brittany Fortresses, and Sevastopol all showed evidence of thorough appreciation of the battleground, developed prior to the onset of the active operations.

Failure to disseminate intelligence information was shown most graphically at Aachen, where troops falling back on the West Wall were often unfamiliar with the fortifications they were to defend. A similar error occurred during the defense of Brest when a tunnel, unknown to the defenders on site, was used by the Americans to facilitate the breach-

ing of the main defense line.

The intelligence activities that take place during the battle are really no different from those which occur in any engagement. Information must be gathered continuously from the immediate defense area and from adjacent sectors. It must be processed quickly and interpreted correctly. Information gathering may be restricted by enemy control of the air and by limited availability of combat troops for ground reconnaissance. The only unusual intelligence feature occurs within the center. Artillery and aerial bombardment destroy or modify built up areas; avenues of approach and obstacles change constantly. Intelligence collection agencies at all appropriate levels must be made aware of these changes. Troops must be made to recognize their responsibility to pass on their special knowledge for use by higher authority.

Correctness in interpretation of available intelligence greatly aided the Soviet defense of Stalingrad. They properly gaged the combat power available to the Germans and thus were able to maintain proper strength of their own. They used up-to-date knowledge of the terrain within the city to frustrate major attacks and to further minor counterattacks. The value of this almost microscopic form of intelligence is pointed up by the following extract from "Red Star" of 22 September 1942 as quoted by Alexander Werth:

Street fighting inevitably falls into several more or less distinct battles. This makes control difficult. Often the C. O. cannot see how the battle is developing

in a neighboring street; but he must be certain that his orders are being carried out exactly. That this may be so, every soldier individually and every unit as a whole must know exactly what the mission is, and all the details of the buildings that they are defending. . . .<sup>8</sup>

The Germans' intelligence efforts frequently leaned heavily upon ground reconnaissance and radio intercept. Lacking air superiority when engaged in defensive combat, they were still able to gain a fairly clear picture of enemy dispositions. Their most significant failures were in interpretation rather than collection. At both Aachen and Stalingrad they misread the signs of enemy buildups and thus erred in their estimate of enemy intentions.

Defense preparations undertaken prior to battle are difficult to obscure from active enemy reconnaissance and from collaborators in the area. Routes of approach and other intelligence information may also be made available to the enemy by sympathizers. Where the defense of an occupied city is undertaken, as at Vienna, most of the population may be actively or passively hostile. Counterintelligence efforts may be hindered by the large population if evacuation has not taken place, and by the lack of reliable local police forces. Special control measures may be necessary and an awareness of the threat must be instilled in the defending troops.

Intelligence doctrine for the defense of major urban population centers should emphasize the needs for detailed

---

<sup>8</sup>Alexander Werth, The Year of Stalingrad (New York: Alfred A. Knopf, 1947), p. 232.

terrain analysis before and during the battle; for the use of all available sources of information including maps, documents, and personal knowledge; for the rapid dissemination of very detailed information concerning the structure of the center; for effective counterintelligence operations aimed at the citizenry; and proper application of normal doctrines and techniques.

This chapter dealt with personnel, logistics, civil affairs, and intelligence. It developed elements of doctrine which should apply regardless of the scheme of maneuver employed in the defense. The following chapter is concerned with evaluation of the plans and operations function and the competing schemes of maneuver derived therefrom.

## CHAPTER VII

### EVALUATION AND DERIVATION OF PLANS AND OPERATIONS DOCTRINE

Before resources can be allocated or intelligence gathered, it must be determined that a center will require defense. What is the likelihood that a battle will take place? There are many indications that major centers will be attacked. During World War II the capital of every European nation engaged in that conflict was threatened. All of them, except London and Moscow, were occupied and the latter was the objective of a major, if unsuccessful drive. Because they are frequently located on major routes of trade or because they contain vital industry, other large urban centers are apt to become targets for attack. Even when centers are relatively small or located away from the main axis of the enemy thrust, they may be subject to seizure because they contain military installations of value to either the attacker or the defender.

A positive response to an enemy threat is demanded by specific reasons which may be military or political or both. Military reasons include the desire to deny to the enemy access to terrain or capabilities of particular value to him, or the desire to retain special capabilities of value

to the defender. The defense of Brest was undertaken both to deny the use of the harbor and to retain the use of the submarine pens located there. The harbor was valueless to the Germans but important to the Allies. The submarine facilities were worthless to the attackers but were of much use to the defenders.

Political reasons for the defense include national prestige and, occasionally, sheer sentiment. The defense of Berlin was purely political in motive. Its retention was deemed vital by Hitler who felt that its loss would prove the German people unworthy of victory. A classic defense for political purposes was that of Nuremberg, a battle not included in this study but mentioned here for illustrative purposes. Of it, General Westphal said:

There were no military reasons for the stubborn defense of Nuremberg. This defense was ordered by the OKW for political motives (Nuremberg as the city of the party days).<sup>1</sup>

Most defenses are undertaken for a combination of military and political reasons. Aachen was defended because it was the first German city to come under Allied ground attack and because it guarded an avenue to the industrial cities of the Ruhr. Stalingrad was held because its retention was of great value to the morale of the Russian people and because it represented both an enticement to the Germans and a base for future operations. Sevastopol was defended as a symbol of Russian determination and because

---

<sup>1</sup>Siegfried Westphal, "Answers to Questions Asked General Westphal." Heidelberg: Historical Division, United States Army, Europe, 1954, p. 17.

its garrison posed a threat to the German forces in the Crimea.

It may be observed that an appraisal of the cost of loss of a major urban population center will frequently be a joint military-civilian endeavor. However, only the military can make an accurate estimate of the price of a successful defense. Because preparations for defense may take considerable time, it behooves the military, in the absence of an established policy, to press for a determination concerning specific centers. And because the defense of any center is likely to be expensive and perhaps counter to the best tactical interest, it is equally incumbent upon the military to make known the effects that a projected defense will have upon broader operations. Hitler's initial decision to hold at Stalingrad and his similar directive concerning Berlin were examples of determinations which opposed the general military interest. In the case of Berlin, commanders in the field took active measures to thwart Hitler's plans but about Stalingrad the opposition took the form of ineffectual protests. A graphic portrayal of the civilian-military conflict over the Stalingrad operation is given by General Schulz:

Beset by the idea that the loss of prestige connected with the voluntary evacuation of STALINGRAD was unbearable, believing that his own military genius would master the crisis, and that the timely arrival of sufficient forces for the relief of STALINGRAD was bound to bring victory Hitler made his decision against the advice and representations of his experienced generals. He had been accusing them of defeatism ever since they suggested the erection of a reserve line along the DNEPR and

DVINA in 1941.<sup>2</sup>

If a major urban population center is to be defended an organization responsible for that defense must be created. But the nature of the defense is such that, done properly, it will require a good deal of preparation. Preparation takes time, which implies that much of it will have to be done while the defending forces are occupied elsewhere. A city to be protected may be located behind the rear boundary of the field army which will ultimately conduct the defense. Under such circumstances the control of the city will rest with logistic or administrative agencies or with a civilian government. Even when the center is within the army sector it must share attention with active operations before it.

The experiences of the Germans at Strasbourg and Aachen show the conflict which may exist as control agencies, little concerned with the need for defense preparations, place emphasis upon logistic, administrative, or economic functions.

How, then, can an organization responsive to the needs of a defense be established? The battles studied illustrated three techniques. The first of these, and probably the most effective, was the designation of a city as a "fortress." With fortress status came formal recognition of the city as a key point and installation of a commander responsible for the coordination of preparations. The Brittany Fortresses and Sevastopol were organized along these lines.

---

<sup>2</sup>Friedrich Schulz, "Reverses on the Southern Wing (1942-1943)." Heidelberg: Historical Division, United States Army, Europe, n.d., pp. 46-47.



The defense preparations there included the erection of permanent fortifications and the provision of a permanent, if inferior, garrison, the principal duty of which was defense of the center.

At Strasbourg and Berlin another approach was taken. There, commanders were designated who were responsible for a defense area somewhat larger than the center itself. Although still directed to accomplish preparations for a defense and to conduct the defense if need arose, the area commanders were not provided with a significant garrison. The coordinative powers of the commanders were severely limited by the plurality of headquarters to which they or the elements of their command were responsible.

A third system, illustrated by happenings at Vienna, utilized a commander given responsibility for defense of a center but injected into the situation almost as the enemy began its attack. This commander controlled only those non-combat forces that were available in the city. Regular troop units remained under command of the field army in whose sector the city was located. As the battle progressed the commander himself became subordinate to that army.

None of the techniques worked particularly well. Even fortress commanders had difficulty in coordinating the activities of units within the fortresses. Where commanders had less authority severe conflicts between competing agencies seriously affected the preparations for defense.

Effective defense preparations will require the atten-

tion of very high levels of command. If a center designated for future defense lies to the rear of field army, the communications zone element under whose control it is must be charged with the responsibility for defense preparation. In this case theater army must coordinate the defense plan with field army most likely to defend the center, and must assure that defensive preparations are, in fact, carried out according to plan. If the center lies within the zone of field army, its defensive preparation must be undertaken by appropriate rear echelon elements available to the army. Field army, then, must coordinate the defense plan with the corps most likely to defend the center, and must assure that the preparations are made in consonance with the desires of corps.

It is appreciated that considerable effort will be required to attain the desired level of coordination. While many centers may require defense, only a few very important ones will be susceptible to extensive, long term preparation. These centers will ordinarily come to the attention of higher echelons of command by virtue of their economic, political, or strategic stature. High command interest in their protection can be expected and a purposeful channeling of that interest would produce a considerable benefit to the defense.

The major doctrinal precepts concerning organization for the defense of a major urban population center are the fixing of responsibility for preparation upon an element

located at the site, the establishment of requirements and plans by the major combat element most likely to conduct the defense, and the coordination and supervision exercised by a headquarters superior to both elements.

In developing plans and requirements for the defense, the major combat element most likely to be involved is guided by a number of fundamental considerations. These include: the reasons for the defense and any specific guidance concerning its nature; the combat power available for the defense; the terrain to be defended, both natural and manmade; and the nature of the enemy threat.

The defenses of Brest and Sevastopol were designed to retain the use of the submarine pens and the harbor, respectively. The configurations of the fortifications there were influenced by those considerations. At Stalingrad, although defensive works were erected outside the city, no serious attempt to hold them was made. The reasons for the defense, denial, enticement, and retention of a base for future operations, required only that some terrain remain secure; no particular feature had to be retained. Political considerations may dictate where the defense will be conducted, as they did at Berlin. Humane considerations may require that a center be excluded from the defense, as they did at Paris and Rome in World War II. Most frequently, however, the defender will be free to choose the location of his defense and may use all or part of a center in his scheme of maneuver.

The combat power available to the defender includes the mobile forces engaged before the center, the relatively static garrison of the center, supporting arms and services, and intangible elements including terrain and morale. The comparative strengths of mobile and garrison forces may determine the manner in which the main force falls back upon the center. If the preponderance of combat power resides with the mobile element the need for effective delay may be great; time must be bought for the occupation and readying of prepared positions. If the garrison has substantial strength a more rapid withdrawal of the mobile elements may be tolerated. At Aachen, where static forces were weak, the mobile elements attempted maximum delay. At Sevastopol, a strongly fortified and manned center, the withdrawing mobile elements broke contact with their pursuers and moved quickly into the haven.

The sum of the mobile and static forces may also influence the configuration of the final defensive position. Where a perimeter defense is envisioned, the number of troops available dictates the size and shape of the ring. At the Brittany Fortresses the location of final defensive positions was determined in large measure by an assumed garrison strength; sites were selected which were close to vital installations because points further away could not be held with the forces expected to be present.

A major commander may influence the distribution of his available forces and may thus effect the degree of delay

required to assure readiness of the final defense. It is unlikely that the commander will be able to increase his total force level, however, and this consideration will bear heavily upon the design of the decisive engagement.

The terrain in which the final battle will be fought must be thoroughly appreciated and used to the greatest possible advantage. In the defense of a major urban population center the commander is aided by a number of unique factors. The center itself is a formidable obstacle. Since the defense of the center may be predicted with some certainty, the commander will have an opportunity to improve the terrain, both in the city and in the areas surrounding it. Since many centers have been defended in the past, the existence of old defense works is at least possible.

Because most major centers grew from trade sites, they tend to be located on relatively flat ground. If any dominating terrain exists it will probably be found on the perimeter of the center or beyond. The selection of the sites for final defensive positions must take this peculiarity into account. If a conventional linear defense in depth is contemplated, the obstacle presented by the center and that afforded by dominating terrain must be tied together. If a perimeter defense is planned, close-linked organization of all of the dominating terrain may be required. In the latter instance the value of dominance must be weighed against the troop strength required to attain it. In some of the locations in Brittany less-than-optimum terrain was chosen

because the most dominant features were too far away from the points being defended. At Sevastopol the outer defense ring, at which the main defense effort was carried out, did include the highest ground in the area. Unless a special capability must be protected, the possession of dominating terrain on the perimeter may be less important than usual; the center provides covered avenues of approach which protect against observation and fire.

Other factors associated with the location of the center may influence the nature of the defense. At Stalingrad, the Volga provided flank protection and a corridor for the movement of supplies and reinforcements. At Sevastopol and in Brittany, the sea provided flank protection but restricted maneuver and the delivery of men and materiel. The defenses of St. Malo and Sevastopol were compartmented by bays. Remote obstacles forward of the center played some part in the defense of Stalingrad, Berlin, and Strasbourg. The Don and Oder Rivers and the Vosges Mountains presented significant obstacles to the forces driving on those cities.

It may be concluded that the major urban population center, and possibly the terrain surrounding it, adds significantly to the combat power of the defending forces. The extent to which this addition assists the defense depends upon the nature of the center and the scheme of maneuver employed. In its simplest application, the built up area of the center may serve only to multiply the combat power of the forces within it. The prolonged resistance in Berlin,

Brest, Stalingrad, and Vienna demonstrated the stiffening which occurs when defense forces fall back into the interior of a city.

The combat power added by the center cannot, itself, be displaced. But compared to less distinguished terrain, the center does require fewer forces to achieve a desired level of resistance. The influence of the center may thus be projected to areas some distance away. If the defending commander will accept less than the maximum assurance of impenetrability, he can remove some of his forces for use elsewhere. One may consider that this technique was used at Stalingrad. There, the Soviets used sufficient force to maintain the integrity of the defense but diverted other available strength to the buildup for a planned counter-offensive.

Additional advantage may be taken of the center if its ability to restrict maneuver is utilized for more than simple resistance to assault. The German failure at Stalingrad was due in part to the inability of the attacker to move superior combat power through the city. This movement limitation can be turned to advantage by using the center to provide a natural shoulder for penetrations made on its flanks. The maneuver of flanking forces is thus restricted and the destruction of flank penetrations by mobile forces is made easier.

It may be observed that the enemy threat usually develops in two phases. The first of these, the approach, is

characterized by movement of large forces over relatively great distances for deployment in the general area of the center. The approach may take the form of a deep penetration directed at the center, single or double envelopment directed around the center, or a frontal attack resulting in the linear movement of the forces in contact to a position immediately before the center. The description of the manner of approach is a matter of judgment. For example, the approach to Stalingrad by the Sixth German Army was a penetration. The concurrent movement of much weaker forces from the south might be described as a minor supporting attack for the northern penetration or as the southern wing of a double envelopment. Other campaigns are easier to classify. Enemy advances upon the Brittany Fortresses, Smolensk, and Strasbourg were deep penetrations. Berlin was the scene of a double envelopment. Aachen, Sevastopol, and Vienna were approached by essentially linear advancements of the line of contact.

The second phase of the enemy threat is the action taken to conquer the center. Conquest is distinguished by the relatively restricted movement of smaller forces oriented upon the center itself. Movements for conquest may be penetrations to split the defenses of the center, double or single envelopments to isolate the center or to place forces in position for penetration from the flanks or rear, or frontal attacks involving small, multiple penetrations and an essentially linear advance of the line of contact.



Lightly defended centers, like Smolensk and Strasbourg, were taken by penetration. Sevastopol was conquered by initial deep penetrations from north and east. Aachen and Vienna were first enveloped and later penetrated. Stalingrad was first penetrated and later attacked in a more linear fashion. Brest and St. Malo were taken by coordinated attack. Berlin, enveloped by the Russians during the approach phase, was finally taken by coordinated, concentric attack.

The manner of approach to the center influences the conduct of its defense. Since deep penetrations or envelopments threaten not only the center but the whole defense force as well, the commander must do something about them. Either blocking or sealing requires combat power which then becomes unavailable to the defense of the center. On the other hand, the enemy himself must use combat power to safeguard the flanks of the penetrations or envelopments. His combat power at the center is also diminished. The defending commander has the option of containing the enemy thrusts or withdrawing and establishing an intact defense line closer to the center. The Russians at Stalingrad chose to contain the Germans. The defenders of Aachen withdrew. A great preponderance of enemy combat power would argue for withdrawal while a marginal preponderance or a weakness in the enemy transport capability might favor containment.

The enemy's approach to a center may be terminated by a deliberate pause for force redeployment or by a successful

defensive action. At Aachen, Brest, Stalingrad, Smolensk, and Strasbourg enemy forces in the approach attempted to take their objectives with elements available at the time. The seriousness of the attempts varied from battle to battle, but the fact that the attempts were made points up the need for preparedness on the part of the defender.

When the enemy begins his second phase, the real defense of the center begins. The defending force can influence the place at which the attacker must deploy for his final assault. Some of the considerations involved in the location of the defense positions have already been discussed, but others, concerning the attitude of the commander and the most effective employment of combat power have yet to be dealt with. The commander is aware of his responsibility to defend the center. The extent to which he orients his defense upon the center itself is a matter of choice. Any threat to the center must be a threat to its defending forces. A threat to the defending forces need not be an immediate threat to the center, providing that it occurs well forward of the center.

If the commander chooses to deploy strong defensive forces well forward of the center, he gains maneuver room to his rear, possible greater mobility for his reserve, and protection of the center and its vital installations from fires incident to the defensive battle. He loses the advantage of the obstacle formed by the center and the wholly covered supply routes which it may provide.

If the commander chooses to deploy strong defensive forces at the edge of the center or within it, he gains the considerable barrier value of the center and the covered communications which it affords. He loses freedom of maneuver and the protection of the center from battle damage.

While favorable defensive terrain would be used, it is still likely that more static combat power will be required to hold the forward line. On the other hand, freedom of movement may permit retention of a smaller reserve.

In nearly all of the battles studied, some attempt was made to hold the attackers well forward of the city. In almost all cases the attempts failed and fighting in the center took place. The forward positions did delay the attackers and did cause them to deploy.

The use of strong forward positions appears to offer a good technique by which to initiate the defensive battle. In addition to the advantages described above, the forward position concept allows the commander to develop intelligence concerning the strength and dispositions of the attacker and to make reasonable estimates of the enemy's most probable course of action. The forward position concept also gives the commander time and space in which to act in consonance with those estimates.

There are three general courses of action which can govern the final defense of major urban population centers. These will be described below and evaluated later, assuming that the elements of doctrine put forward heretofore are

applied equally well to each course. These three courses of action constitute subdoctrines which require detailed comparison.

One method by which a center may be defended is the classic "fortress" system. Used in Brittany and at Sevastopol, the concept envisions the rapid withdrawal of defense forces into a highly fortified zone of substantial size. No serious attempt to avoid encirclement or isolation is made. A sustained siege is anticipated and accepted. The added combat power provided by the center is used to increase the center's resistance to penetration. The reasons for use are generally given as the provision of a safe haven for forces driven from other positions, the retention of some significant capability, and the maintenance of a threat to the enemy.

The fortress depends upon its own garrison, either original or reinforced by retreating troops, for all operations. Counterattacks and sallies are carried out without support from other forces. Ultimate relief may be planned but long term independence is stressed. Food and other supplies come from stockpiles established prior to isolation. Elaborate fortifications are erected and all possible measures to insure the physical security of the garrison are taken.

A second system of defense, used at Aachen and Berlin, might be termed a "modified fortress" technique. The concept calls for maximum delay and resistance to encirclement.

If encirclement is forced, however, the surrounded elements establish a moderate size perimeter. Other forces, of which the surrounded elements were a part, may attempt relief. If relief fails the remaining forces depart and the encircled elements accept sustained siege. The added combat power provided by the center is used to permit initial release of forces for mobile defense. Later it is used to increase the perimeter's resistance to penetration. The reasons for use of this technique are essentially the same as for the fortress method.

Like the fortress method, the modified fortress technique depends upon its own garrison for all operations. Few troops will have occupied the perimeter initially and the garrison will consist of elements of the main defense force which were left behind. After the withdrawal of the main defense force all counterattacks and sallies will be undertaken without support of other forces. Relief may be planned, but if not accomplished quickly abandonment and ultimate loss of the force is accepted. Almost all resources will have come from the main defense force. Fortifications, if provided, will be hastily prepared field works. They will be perimetric in configuration and arranged in depth.

The third technique for the protection of major urban population centers might be termed the "free defense." The system requires that the center be considered an integral part of the defense of a larger sector. Maximum effort is applied to prevent encirclement or penetration. Temporary

isolation of small maneuver elements will be accepted but withdrawal will take place before major elements are encircled. No siege is anticipated and none will be accepted. The added combat power provided by the center is used to permit permanent release of forces for mobile defense. The restriction of maneuver afforded by the center is used to fix enemy forces during counterattacks against flank penetrations.

The free defense depends for troop strength upon all available elements in the major sector in which the center is located. All other resources are drawn from stocks common to the major sector. Fortifications, if provided, will be hastily prepared field works. They will be linear in configuration and arranged in depth. The free defense stresses the maintenance of contact between elements of the major sector and the use of mobile forces to restore gaps which may appear.

Operations at Stalingrad, Smolensk, and Vienna exemplify forms of the free defense.

This chapter evaluated the important features of battles described previously and presented elements of doctrine in the functional area of plans and operations. Those portions of the doctrine which deal with organization of forces and the manner in which engagement is initiated are essentially common to any technique employed for the defense of major urban population centers. Developed for further test were three competing courses of action, the use of which

would govern the maneuver of forces engaged in the defense. The competing courses will be further evaluated in the following chapter.

## CHAPTER VIII

### TESTING OF COMPETING ELEMENTS OF DOCTRINE

This chapter presents a detailed evaluation of three competing courses of action developed in the previous chapter. The intent of this evaluation is the illustration of the courses of action, the comparison of the courses to determine the best one, and the development of changes which might improve any of the courses.

To illustrate the courses of action and to determine the effects of their use, a large scale nonnuclear war situation is chosen in which division and corps size units are the basic maneuver elements. For purposes of simplicity it is assumed that, other than the center, there are no significant terrain features in the area and that both participants are free to move except when constrained by actions of their opponent. Other assumptions include a 3:1 superiority of force in favor of the attacker, a homogeneous distribution of force along the line of contact, and a total killed and wounded count proportional to the strength of the force.

PLATE XVI illustrates the events of a battle in which the defender applies the fortress concept. The corps in whose sector the center is located is responsible for defense



Plate  
XVI

# THE FORTRESS DEFENSE CONCEPT

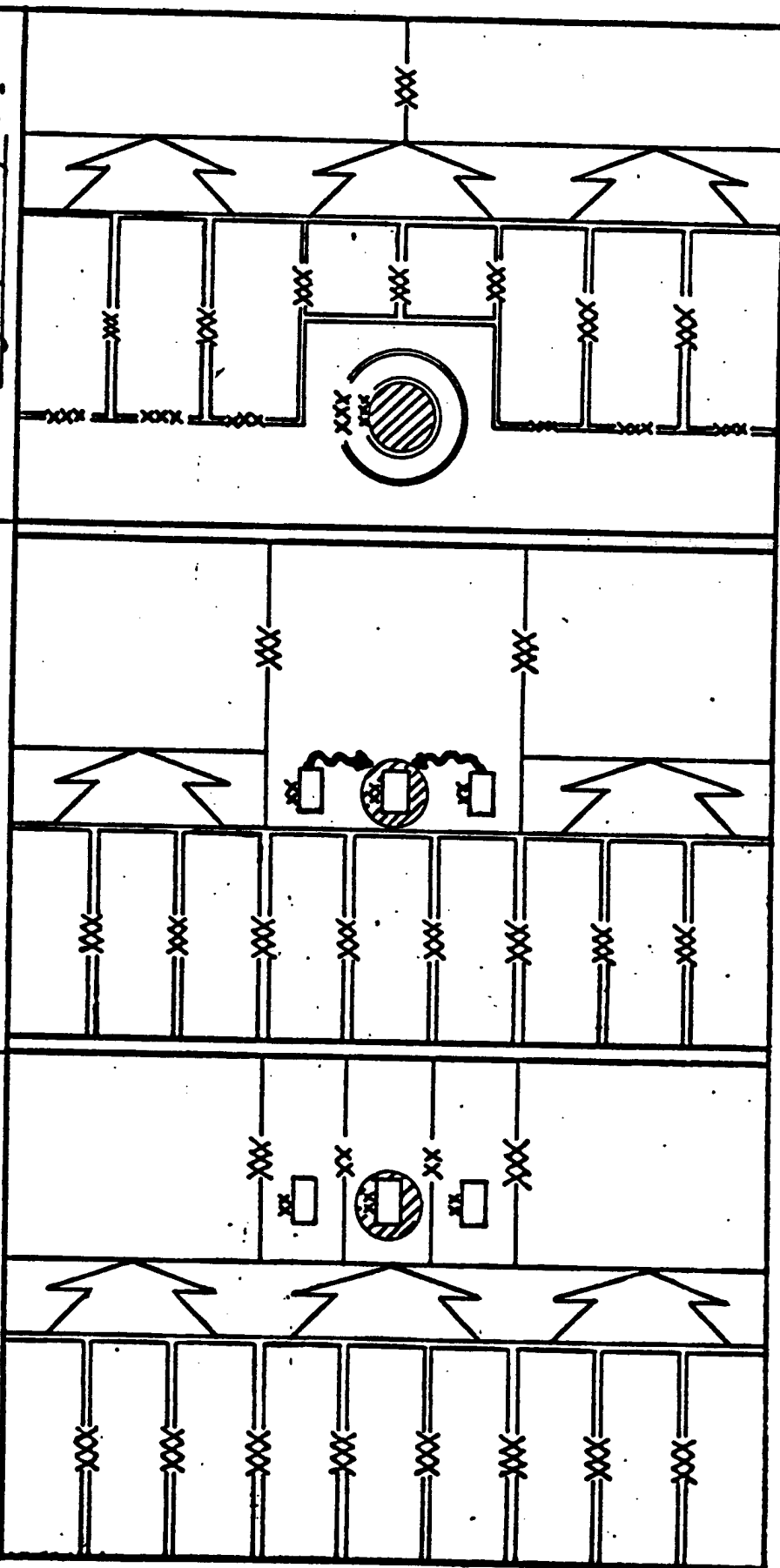
(STAGE I)

Enemy Superiority 3:1

(STAGE II)

Note: 1 Corps = 3 Divisions  
(STAGE III)

Enemy Superiority 4:1



of the center. As the enemy confronts the center, the responsible corps withdraws from its forward positions and closes on the city without significant attempt to delay. The flank divisions of the corps occupy positions along the fortified perimeter of the center. The division immediately before the city falls back upon similarly located fortifications. The flank corps fall back and close behind the center to continue a defense to the rear. The enemy, choosing to contain the isolated corps, provides a similar size unit for that mission. The balance of force now to the rear of the center becomes 4:1 in favor of the attacker. The corps within the center becomes dependent on stockpiles, which in time become depleted. The containment force is then reduced or is used to enter the fortress and capture or destroy the weakened corps. The length of the defense is governed by the availability of supplies.

PLATE XVII illustrates the events of a battle in which the defender applies the modified fortress concept. The defending division in whose sector the center is located is responsible for defense of the center. As the enemy confronts the city all elements oppose his forward movement. The division before the center defends stubbornly but is driven back to the better defensive terrain of the center. The flank divisions resist strongly, but, lacking the terrain advantage of the center, are forced to withdraw. When contact is broken between flank and center divisions, the parent corps retires and reconstitutes an intact defensive line

Plate  
XVII

# THE MODIFIED FORTRESS DEFENSE CONCEPT

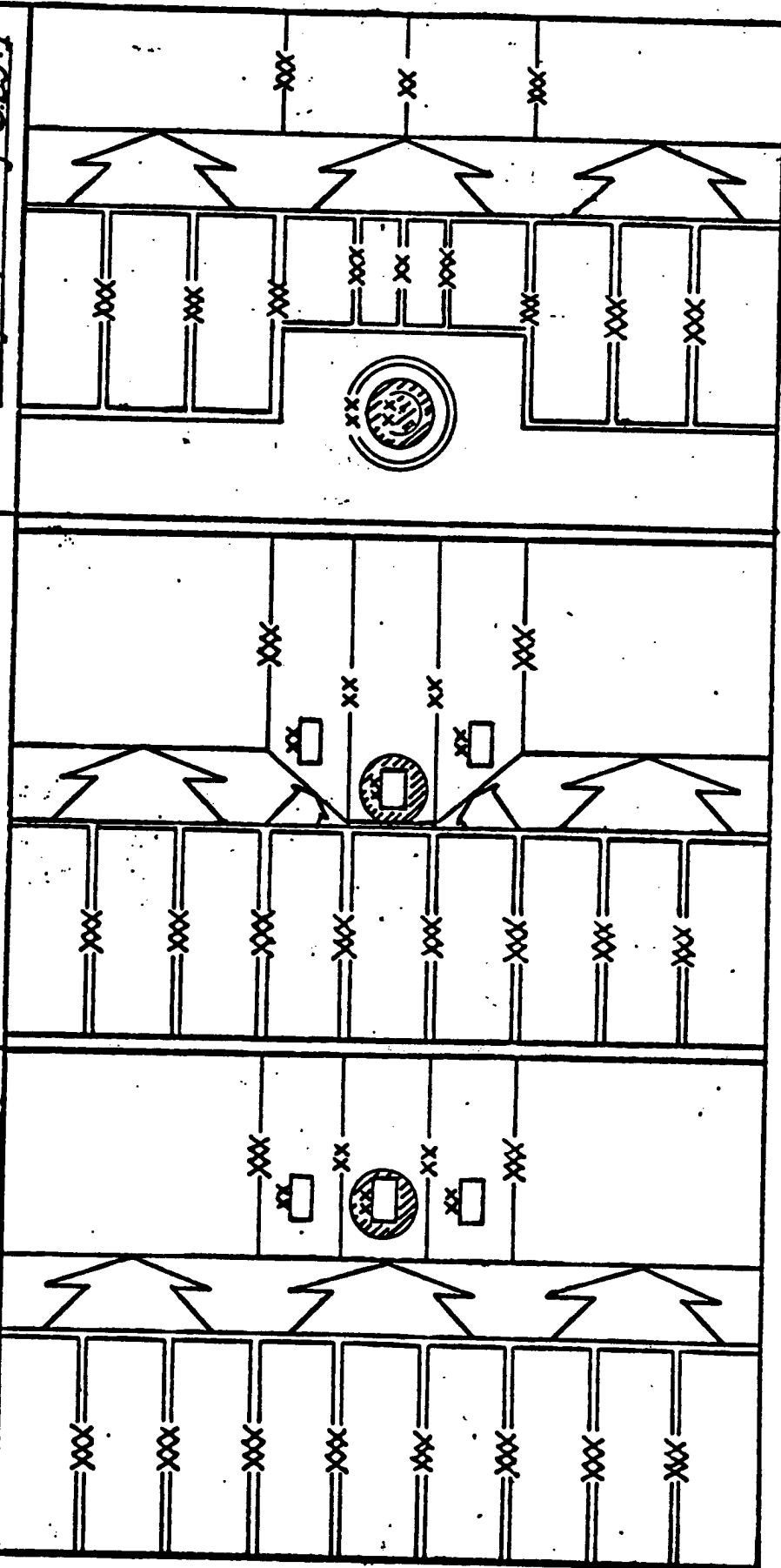
(STAGE I)

Note: 1 Corps = 3 Divisions  
(STAGE III)

Enemy Superiority 3:1

(STAGE II)

Enemy Superiority 3.25:1



to the rear of the center. The division in the center establishes a reduced perimeter within the center. The enemy, choosing to contain the isolated division, provides a similar size unit for that mission. The balance of force now to the rear of the center becomes 3.25:1 in favor of the attacker. The division within the center becomes dependent upon limited stockpiles and whatever supplies it brought with it into the perimeter. The supplies dwindle rapidly. The containment force is then reduced or is used to enter the perimeter and capture or destroy the weakened division. The length of the defense is governed by the availability of supplies.

PLATE XVIII illustrates the events of a battle in which a free defense is used. The corps in whose sector the center is located has primary responsibility for the defense of the center. Flank corps maneuver to maintain contact with the center corps. As the enemy confronts the city, all elements oppose his forward movement. The division before the center defends stubbornly but is driven back to the better defensive terrain of the center. The flank divisions resist strongly but, lacking the terrain advantage of the center, are forced to withdraw. Flank corps elements adjust their positions to maintain contact with center corps. As enemy incursions on the flanks of the center threaten loss of contact between the division in the center and those on its flanks, the division delays through the city. Corps counterattacks against flank penetrations, using the center

Plate  
XVIII

# THE FREE DEFENSE CONCEPT

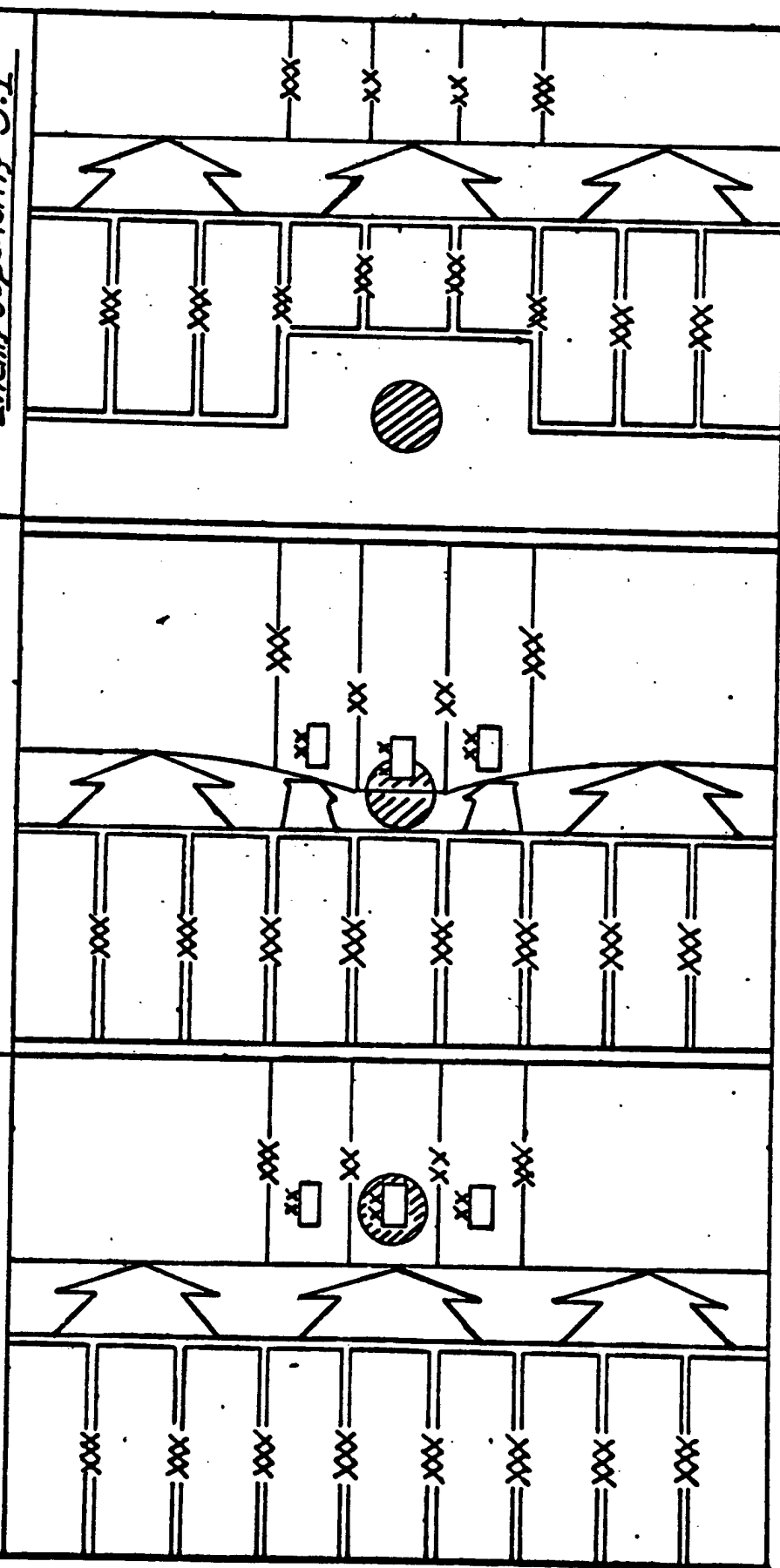
(STAGE I)

Enemy Superiority 3:1

Note: 1 Corps = 3 Divisions  
(STAGE III)

Enemy Superiority 3:1

(STAGE II)



as a fixing element. Corps tolerates withdrawals on the flanks of the center until it can no longer be assured of the safety of the division in the city. At that time it permits the withdrawal of that division and continues the defense to the rear of the city. The balance of force remains 3:1 in favor of the attacker. The length of the defense is governed by the ability of the corps to resist attacks on its flanks.

From the very rudimentary testing two conclusions may be drawn the validity of which is subject only to the reality of the assumptions. The first of these concerns the concept of tying up enemy forces by leaving friendly ones behind. The test shows that if the enemy is initially superior in force he will become more so if he chooses merely to contain isolated defense forces. The supposition that the attacker will use a substantially equal force for containment is borne out by the battles in Brittany and at Sevastopol. The smaller the friendly stay behind force, the smaller the enemy gain in relative strength.

The second conclusion is that the free defense is superior to the other schemes of maneuver which were tested. The conclusion is based upon the free defense's ability to hold the relative force at a constant level, upon its safety, and upon its most effective use of the added combat power provided by the center. By rejecting isolation and siege, the free defense assures that a maximum force level is maintained during and after the battle for the center.

Because there are no requirements to close major gaps in the line of contact caused by the extraction of friendly divisions or corps, the free defense reduces the probability of rapid enemy penetration and exploitation. The free defense recognizes the fact, demonstrated at Aachen, Berlin, and Vienna, that an attacker faced by strong defensive positions will most frequently attempt to conquer a center by some form of envelopment. By accepting controlled delay in the center, the scheme generates combat power for use against the main threat, that of encirclement. The mobility available to the defense is used to the maximum, as is the obstacle value of the center. The free defense thus develops combat power to the fullest extent. While it may not hold a center for as long as the other concepts, its use best preserves the combat power of the defending army and offers the best chance of infliction of severe damage upon the attacker.

How do changes in the assumptions effect the conclusions? The simple test did not consider terrain or geography; the possibility of mandatory retention; an enemy decision to attack rather than contain; the effects of the tactical use of special weapons; or limited use of airborne or air assault techniques.

Since the simple model assumed that the center was the sole obstacle in the area, real terrain can only introduce additional barriers. Obstacles whose orientation is parallel to the line of contact assist any of the courses of

action but particularly favor the modified fortress or free defense. This is so because such barriers improve the flank protection of the center. A possible exception exists where a difficult obstacle is present immediately to the rear of the center. While providing flank protection, such a barrier also makes movement of friendly forces more difficult. At Stalingrad the Soviets were able to turn this kind of terrain to the advantage of the defense.

Obstacles perpendicular to the line of contact tend to fragment the defense and impede movement of reserves. Depending upon location they may aid or hinder defense of the flanks. Obstacles of this nature favor independent action by the center's defense force.

Geography may dictate a course of action by restricting the maneuver room available to the defenders. Once they had closed upon the fortresses, the forces in Brittany and Sevastopol could conduct only one form of defense. If the decision is made that an isolated center must be held, the only course of action which can be adopted is the fortress defense. The length of resistance to be expected of an isolated garrison can be estimated if troop strength and status of supply are known. The decision to be made concerns the relative values of protracted defense and troop strength necessary to carry it out. The garrison of an isolated center, once encircled, is effectively lost to future operations outside the center. In Brittany and at Sevastopol the option to withdraw existed, at least early in the campaigns.



In both cases the decision to defend was made and the garrisons were ultimately lost.

The decisions at Sevastopol and Brittany were examples of requirements for mandatory retention of centers. Berlin and Aachen were also to be held indefinitely. Stalingrad was to be held until the Russian counteroffensive could be launched. Such decisions can be made for political or military reasons. Political motives tend to dictate defenses of indefinite duration; military requirements may specify either indefinite or limited periods of defense.

If the requirement for protracted defense is known in advance, adequate preparations, including stockpiling and erection of field fortifications, should be undertaken. A small, compact perimeter taking maximum advantage of the obstacle value of the center should be considered, since the smallest possible garrison should be made available to defend it. As demonstrated before, large stay behind forces reduce combat power available for other defense operations.

The use of small forces, with corresponding small resupply requirements, also makes consideration of aerial or seaborne replenishment more possible. In the conduct of the defensive battle under these special circumstances, the use of the modified fortress technique is favored, principally because it affords the possibility of halting the enemy before the center is isolated.

What if the enemy decides to reduce the isolated center instead of containing it? The enemy must achieve supe-

riority of combat power to attain his goal. In the test case he enjoyed a gross force advantage of 3:1. If he chooses to employ that 3:1 advantage at the center, the balance anywhere in the defense zone remains unchanged. If he chooses a lesser advantage, perhaps 2.5:1, his superiority elsewhere increases slightly. If he chooses to increase his local advantage to a greater value, for example 6:1, he loses some of his relative strength elsewhere. In the test case, in which a corps defended the center using the fortress concept, the enemy application of 6:1 superiority at the center would reduce his advantage at remote locations to 1.5:1. The enemy's selection of attacking strength effects the combat power ratio and the length of the defense. Since the enemy has freedom of choice and must be granted the ability to make sound decisions, it must be assumed that he will deploy forces at the center in whatever strength is necessary to obtain maximum advantage for his entire operation. The enemy can accept a lessening of advantage at remote locations for the duration of the attack upon the center. Based upon past experience, such as the happenings at Brest and Sevastopol, the attacker knows that his own casualties will probably be fewer than the total of killed, wounded, and captured among the defenders. He can therefore anticipate that the original balance of force will at least be restored, once the battle for the center is finished. The possibility of an enemy attack upon an isolated center does not change the previously drawn conclusion that the smallest possible

stay behind force should be used.

The tactical use of nuclear, chemical, and biological weapons against the defenders of a center favors adoption of either the fortress or free defense. The elaborate fortifications which are part of the fortress concept can be made to withstand most nuclear bursts and can be equipped with protective equipment to eliminate or lessen the effects of chemical or biological agents. Tactical use of any of the weapons by the defenders may prevent massing by the attacker and may create contaminated zones and obstacles which materially aid the defense. The defender, located in relatively secure positions, may consider the use of the mass destruction weapons at points near or within the defense zone. Unprotected assault troops would suffer greatly from this technique, either from casualty effects or from the necessity for operating in masks and impregnated clothing. The limitations imposed by isolation affect the fortress concept applied to tactical special weapon war. Stockpiles of nuclear, chemical, and biological weapons will ultimately be depleted. Stockpiles of other commodities and the routes to them will be subject to enemy attack. Logistic installations must be afforded the same protection as combat fortifications.

The free defense counters the effects of nuclear, chemical, and biological weapons by dispersing its forces and stocks and by employing frequent, rapid movements to avoid creation of firmly established targets. Enemy use of tacti-

cal nuclear weapons in the center may create rubble which will hinder his movements and will produce contaminated areas which bring about the same effect. Nuclear weapons used outside the center may rupture existing defense lines by damaging field fortifications and killing or injuring their occupants or by causing casualties among unprotected personnel. The shifting of troops, inherent in the free defense, must close whatever gaps are caused by enemy action. Chemical and biological agents will affect participants in a free defense more severely than those in a fortress defense. Either the sickness and disease caused by them, or the measures needed to protect against them, tend to reduce the mobility and effectiveness of the defense force. Dispersion, frequent displacement, and the effective use of reserves will reduce the effect of toxic materials. Special weapons may be used by the defenders to prevent massing, channelize attacking forces, disrupt logistic operations, and facilitate friendly counterattacks.

The modified fortress technique is most greatly damaged by the use of special weapons. Until the center's protective force adopts its perimeter defense it is subject to the same effects as are participants in the free defense. When isolation occurs, however, the defense force is relatively fixed in position in field fortifications or structures in the city. It has neither mobility nor elaborate physical means with which to protect itself. Its own offensive capability is severely limited by both restricted stockpiles and

vulnerability of delivery means.

Enemy possession of a real, if limited, airborne or air assault threat favors consideration of the fortress defense concept. If the enemy chooses to use his capability during his approach to the center, only the fortress system assures the presence of some garrison and defense works with which to repel him. If either the free or modified fortress defense is contemplated, a calculated risk must be taken that the enemy will not use airborne or air assault attack. If the risk is not taken, forces must be made available for the protection of the center. In the latter instance the defending commander is deprived of a portion of the combat power he would ordinarily have for the forward defense of the center.

If the enemy chooses to use his capability during the course of the final defense battle, he may hurt the free defense by cutting lines of communication to the rear, thereby reducing the mobility of the defense and restricting the use of reserves. He may also attack further to the rear, causing the defense commander to divert forces to contain that threat. Neither the fortress nor the modified fortress systems would be as badly damaged by the enemy use of airborne or air assault forces. Use of small numbers of free-fall special troops might be made against the elaborate defense fortifications of the fortress system but limited drops or landings of ordinary assault forces, unsupported by a major ground effort, would involve the risk of valuable

resources with negligible chance of success. It is therefore unlikely that the latter operations would take place. Defenders in any defense system would have to remain alert to the enemy threat but in the free defense, in which maintenance of contact is essential, special vigilance would be required.

The use of aerial techniques by friendly forces would assist both free and modified fortress defenses. Free defense would benefit from the mobility which could be gained. Modified fortress defense would profit similarly during the early stages of the battle and would be assisted later by delivery of small quantities of supplies and reinforcements. The likelihood of major use of friendly air delivery is not very great. If the enemy's presumed superiority includes control of the air such operations would be very expensive, if not impossible.

This chapter examined the fortress, modified fortress, and free defense. It was concluded that the free defense is the best technique for general use but that the other systems may be required under special circumstances. From the evaluation additional features, desirable for inclusion in the free defense concept, were developed. These included: the emphasis on protection against encirclement by use of strong counterattacks against enemy forces on the flanks where movement is restricted by the presence of the center, semi-independence of defense forces when obstacles perpendicular to the line of contact partition the defense, con-

sideration of withdrawal without further defense after loss of a geographically isolated center becomes inevitable, greater emphasis on mobility and use of the reserve, and the need for special vigilance when the enemy possesses a significant airborne or air assault capability.

General Blumentritt has said of the defense in general:

Tactical defense can be effective and necessary only for a limited time. A modern enemy, seriously attacking with all means at his disposal must be successful in the long run. Whatever means may be used by the defense, I feel sure of one thing; It can only be based on mobility and maneuverability. Modern tactical defense must be free and able to withdraw in the face of an attack.<sup>1</sup>

The author believes that General Blumentritt's conclusions are valid and that the free defense, when applied to the protection of major urban population centers, meets the essential criteria he has defined.

This chapter dealt with operations that were assumed to be supported by personnel, logistics, civil affairs, and intelligence activities carried out in consonance with common doctrinal elements developed previously. In the following chapter the author will state all of the proposed doctrine for the defense of major urban population centers and will note the circumstances under which deviation from the doctrine would be beneficial.

---

<sup>1</sup>Guenther Blumentritt, "Defense," Office of the Chief Historian, European Command, n.d., p. 22.

## CHAPTER IX

### A PROPOSED DOCTRINE FOR DEFENSE OF A MAJOR URBAN POPULATION CENTER

This chapter contains a proposed doctrine for the defense of major urban population centers. It represents conclusions drawn from the results of evaluations covered in previous chapters. Conditions under which exceptions to the doctrine might be advantageous are also discussed.

The following doctrine is recommended for adoption by the United States Army for use by division and larger units:

The defense of major urban population centers is of concern to all echelons of command. It is costly in manpower and material and must be prosecuted in an efficient and economical manner.

The decisions to defend major urban population centers may be made at the national level. Major commanders concerned will anticipate such determinations and will prepare estimates of the effect of such determinations for presentation to the decision making agency. Early decision is essential to proper planning and execution of the defense. Commanders will take action to elicit such decisions before significant threats develop. When decisions are left to the major commander he will consider the military worth of the



centers and the expected costs of retention.

The preparation for the defense of a center is time consuming and may involve the active participation, at different times, of combat, combat support, and combat service support units belonging to different commands. Coordination between these units will be assured by the headquarters to which all commands involved are subordinate. The superior headquarters will designate a subordinate combat command responsible for defense planning and will assure that defense preparations undertaken by other than the designated command are in consonance with the defense plan. Theater army headquarters will normally coordinate planning and preparations for the defense of important centers located in the communications zone. Field army will normally coordinate planning and preparation for the defense of important centers located in the field army service area. Corps will normally coordinate planning and preparation for the defense of centers located to the rear of division boundaries and will assure that field army combat support and combat service support elements positioned in the centers cooperate with preparation activities.

The defense of the center will be integrated with other defense operations in the zone in which the center is located. The presence of the center will exert no disproportionate influence on the nature of the defense of the zone. Area or mobile defense may be selected as appropriate.

The built up area of the center provides a valuable

obstacle for use by the defending forces. It serves to increase available combat power by permitting relatively small forces to hold a sizable portion of the zonal defensive position. Forces not required for the defense of the center proper are used to increase defensive strength elsewhere. The existence of the center by itself does not dictate the use of a static defense of the terrain surrounding it. The defense there may make best use of its combat power by utilizing its mobility to the maximum and by degrading that of the enemy by channeling his attacks toward the obstacle formed by the center.

The defense is conducted in a manner which makes possible the maximum application of friendly combat power. Major effort is devoted to the guidance of attacks into unfavorable or restrictive terrain in which counterattacks will be most effective.

The defense will be initiated by strong forces positioned on good defensive terrain well forward of the center. Rivers, mountain or hill masses, swamps, or manmade obstacles may be used to strengthen the forward positions. Special erection of barrier systems and field fortifications may be undertaken provided such efforts do not detract from construction in support of the main defense system. Forward forces prevent surprise of the main defense, cause the enemy to lose momentum and to deploy, and provide information concerning the attacker's most probable course of action. Forward forces may accept decisive engagement if the probability

exists that enemy combat power may be reduced significantly.

If withdrawal of the forward forces is made necessary, new, prepared positions are occupied. These include locations within the center and strongpoints in the terrain on the flanks of the center.

All available defense forces are used to halt further advances. Combat power is so distributed that maximum advantage is taken of the obstacle value of the center. If terrain features exist which tend to partition the defense, combat power will be distributed to assure capability of semi-independent action by forces within the partitions.

Maximum mobility of the total defense is gained by limiting forces within the center to those necessary to deny rapid movement to the attacker. If a protracted defense is anticipated, vehicles and equipment surplus to the needs of the forces in the center may be reallocated to those outside the center, thus further improving the mobility of the entire defense. Under similar circumstances, artillery, usually attached or organic to elements in the center, may be reduced in strength to provide more firepower to units conducting mobile portions of the defense. Adequate anti-tank and engineer capability must be allowed to remain with the forces in the center. Tactical deception may be employed to create the impression of greater strength in the center.

Encirclement constitutes the greatest threat to strongly defended centers. Encirclements are defeated by the use of powerful mobile forces whose counterattacks are directed

against the flanks of the initiating penetrations. The center restricts maneuver of attacking forces seeking to penetrate at or near its flanks. The defense will stress the use of the center as a fixing element against which the attacker will be driven by the counterattack force. Barriers and fortifications outside the center will be arranged to assist this maneuver. Voids in the barrier system will be provided through which enemy attacks will be channeled.

Counterattacks may be mounted by local or higher echelon reserves. Reserves will be positioned so as to facilitate major counterattacks against flank penetrations, provision of light forces for use on the flanks of the center in support of the counterattacks, and, exceptionally, provision of reinforcements for elements in the center.

Throughout the conduct of the defense, contact will be maintained between elements actively engaged in the operations at or near the center and those in other portions of the defense zone. All forces will remain specially vigilant against airborne or air assault attacks aimed at severing contact or impeding the movements of reserves.

If the attacker forces withdrawal of flank or center forces or achieves significant penetrations which cannot be eliminated, the positions of elements are adjusted to assure that contact is maintained. Forces in the center may delay through it if this is necessary to preserve contact with flank elements. All possible measures are taken to resist encirclement of the center or its defense force.

If the attacker achieves deep penetrations or envelopments which cannot be contained and which seriously threaten the defense force in the center, that force will withdraw. Denial operations and demolitions will be performed in consonance with existing guidance. Measures to recapture the center or to continue the defense to its rear will be taken as appropriate.

The active defense of the center will be undertaken by well trained troops. Units experienced in house-to-house fighting are especially desirable for use in the center proper. The proficiency of units inexperienced in city combat can be increased most effectively by the assignment of specially qualified cadresmen. These can inject personal, detailed knowledge at the smallest unit level and can supervise application of that knowledge at the point of use.

Within the restrictions imposed by the laws of land warfare, local paramilitary organizations and civilians will be used to assist in the defense. Paramilitary units will not be used for missions which are critical for the defense. They will normally be employed for provision of rear area security, for control of civilians and for performance of logistical tasks. Exceptionally, they may be used in an economy of force role in an inactive sector. Civilians who are not members of paramilitary organizations may be organized into labor teams for construction of field works and for performance of service functions in rear areas.

Local personnel, whether members of paramilitary units

or not, may contribute to the defense effort as individuals. Their special knowledge of language, customs, and the details of the configuration of the center can be used by the forces to facilitate and strengthen the defense. Temporary integration of indigenous personnel, as individuals, should be considered.

The defense of a major urban population center may produce heavy casualties and a lowering of morale, particularly if house-to-house fighting occurs. Development of individual and small unit skill will reduce the number of killed and wounded. Alertness and sound tactical maneuver will prevent the isolation and ultimate capture of significant numbers of friendly troops. Thorough knowledge of the terrain and movement under the cover of darkness will enable separated small units and individuals to rejoin their parent organizations. Morale can be maintained at a satisfactory level by developing maximum competence in individual soldiers and small units, by provision of creature comforts to the extent possible, and by the frequent appearance of higher echelon commanders.

Adequate supplies must be available to the defenders at all times. Food and medical supply stockpiles at dispersed locations will be established early in the preparation for the defense. Construction and barrier materials will be made available in time to satisfy the demands imposed by the erection of the planned barrier system. Additional materials will be stored for later use by the defend-

ing combat forces. Fuel and ammunition reserves will be established at dispersed locations when it appears that active defense is imminent. Emergency wells, water points, pipelines, and terminal facilities should be provided to assure an uninterrupted flow of bulk commodities. Reserve stock levels will be based upon the estimated duration of the defense, the estimated consumption rate of supplies by class, and the anticipated delivery capabilities of the transportation system. Rationing of commodities in short supply may be required.

The transportation system which supports the defense of a major urban population center will be subject to enemy interdiction. Wholesale delivery routes will be attacked from the air and by long range weapon systems. Retail supply avenues, from supply point to using unit, will be attacked from the air, by artillery and mortar fire, and, possibly, by ground action. Protection of routes of supply is essential. Adequate ground and anti-aircraft defense must be provided to assure continued movement of supplies to the defending forces. The effectiveness of enemy interdiction may be reduced by the use of multiple routes of communication, operation during periods of reduced visibility, and use of all available modes of transportation. The use of requisitioned civilian transport and vehicles organic to elements engaged within the center should be considered. The use of wagons, pack animals, and small boats may be considered under special circumstances.

Construction of field fortifications, positions, and barriers, in consonance with the defense plan, will be accomplished during preparation for the defense. The building of long, elaborate field works, intended to resist all penetration, is wasteful of resources and therefore undesirable. The barrier system should be designed to restrict enemy movement to routes selected by the defender. Blocking positions are constructed to limit the depth of penetrations as well as their width. Improvement of the forward edge and flanks of the center itself will be stressed. Demolitions required to provide long range fields of fire will be undertaken. In support of the planned scheme of maneuver, strong-points, located beyond the flanks of the center, will be constructed. Care will be exercised in erection of barriers to assure that movement of counterattack forces is facilitated. Covered routes of communication will be provided. Maximum use will be made of existing structures. Civilian labor, if available, will be used to forward the construction task.

Depending upon its location and status, a major urban population center may be under military, civilian, or joint government. Friction may exist between agencies responsible for military operations and those charged with civil administration. The headquarters responsible for coordination of defense preparations will resolve differences between agencies involved and will assure that a clear and definite policy concerning the administration of civilian affairs is



established. Effective control of the civilian population will be maintained in accordance with that policy. Continued cooperation between military and civilian agencies is essential.

If possible under the circumstances and if in consonance with established policy, early partial evacuation of the center will be accomplished. Women, children, and others not required for defense efforts will be displaced as soon as a real threat to the center is recognized. Other noncombatants, kept in place to assist in defense preparations, will be released after the preparations have been completed. A sufficient number of civilian personnel will be retained to assure that vital public functions are maintained, that suitable service activities are continued, and that guides and interpreters are available for use by the defense forces. Evacuation of civilian personnel will make maximum use of commercial and private transportation. Emergency stocks of necessary commodities will be established for civilians who are not evacuated. Medical services for the remaining noncombatants will be provided by local civilian facilities and personnel.

Intelligence activities in support of the defense will stress detailed knowledge of the center and rapid dissemination of information concerning changes to its structure which may occur as a result of the battle. Planning for the defense depends upon thorough knowledge of the configuration of the center and the terrain surrounding it. The presence

of hidden avenues, such as tunnels and sewer systems, is of great importance to the active defense of the center proper. The existence of distribution and communications networks is of consequence to the logistic support of the operation. Peculiarities of the ground around the center may determine the scheme of maneuver to be adopted. Sources of information include maps, public and private documents, and the personal knowledge of local inhabitants. Sources of information concerning changes in the configuration of the center due to active operations include troops and civilians familiar with the area. Troops must be made aware of their responsibility to report this kind of information to appropriate intelligence agencies. Similarly, intelligence agencies must assure that intelligence is disseminated rapidly and to the proper level of command. Small troop units in particular require detailed, current knowledge of the area in which they are to fight.

If the defense of the center occurs in hostile territory, counterintelligence will become a function of considerable importance. Even if the battle is fought in friendly territory, collaborators may be expected to try to furnish the enemy with information. Thorough screening of personnel with access to security areas and the implementation of stringent protective measures in sensitive areas will lessen the successfulness of these attempts.

The foregoing represents a doctrine generally applicable to the defense of major urban population centers.

While many circumstances may exist in which the doctrine might be effectively modified, two such conditions require special attention. One situation involves the mandatory retention of a center for a prolonged or indefinite time. Here the withdrawal of the defense force is disallowed; some provision for an isolated garrison is required. The following special modification of the basic doctrine is proposed:

When deep penetrations or envelopments can no longer be contained and the defense force in the center is seriously threatened, the flank forces provide maximum assistance to the center force as it withdraws into a perimeter in the center. The flank forces then break contact with the center force, withdraw, and close behind the center to continue defense to the rear.

The smallest force consistent with the mission is allowed to remain in the center.

If mandatory retention is anticipated during the planning or preparation of the defense, construction will include improvement of positions along a planned final perimeter. Additional stockpiles of rations, medical supplies, barrier materials, fuel, water, and ammunition will be established within the planned final perimeter.

Attempts to relieve the isolated force or to replenish its supplies will be made as the tactical situation permits.

The second condition requiring special consideration is that in which the defending forces have limited maneuver

room to their rear. The circumstance is best illustrated by the position of a force defending a seaport against attack from the land side. For this special case the following modification to the basic doctrine is proposed:

If the attackers achieve deep penetrations which threaten the integrity of the defense, consideration must be given to withdrawal to the flanks if possible, and to the rear by air or sea if transportation means are available.

If isolation is anticipated during the planning or preparation for the defense, construction will include positions along a planned final perimeter which protects the center and flanks of the area to be retained. Additional stockpiles of rations, medical supplies, barrier materials, fuel, water, and ammunition will be established within the planned perimeter.

Defense plans should include provision for the ultimate withdrawal of the force by sea or air.

This paper has presented a study of the defense of a major urban population center by division or larger units. The doctrine formulated as a result of the study is applicable to a wide range of military circumstances. However, while the fundamental problem of ground defense was investigated in detail, the scope of the thesis limited exploration of the effects of the use of special weapons and airborne or air assault techniques. It is therefore recommended that further study be undertaken to determine how the unrestricted use of these would affect the doctrine developed here.

## BIBLIOGRAPHY

### Books

- Allen, W.E.D., and Muratoff, Paul. The Russian Campaigns of 1944-45. Harmondsworth, Middlesex, England: Penguin Books, 1946.
- Eisenhower, Dwight D. Crusade in Europe. New York: Doubleday and Company, Inc., 1948.
- Fainsod, Merle. Smolensk Under Soviet Rule. Cambridge: Harvard University Press, 1958.
- Gist, Noel P., and Halbert, L. A. Urban Society, New York: Thomas Y. Crowell Company, 1933.
- Gorlitz, Walter. Paulus: Ich Stehe Heir auf Befehl! Frankfurt am Main: Verlag fur Wehrwesen, Bernard und Graefe, 1960.
- Guderian, Heinz. Panzer Leader. New York: E. P. Dutton and Company, Inc., 1952.
- Liddell Hart, B. H. The German Generals Talk. New York: William Morrow and Company, 1948.
- Liddell Hart, B. H. (ed.). The Rommel Papers. New York: Harcourt Brace and Company, 1953.
- Reiss, Curt. The Berlin Story. New York: The Dial Press, 1952.
- Schroter, Heinz. Stalingrad. New York: E. P. Dutton and Company, Inc., 1958.
- Seth, Ronald. Stalingrad: Point of Return. New York: Coward McCann, Inc., 1959.
- Smith, Jean Edward. The Defense of Berlin. Baltimore: The Johns Hopkins Press, 1963.
- Speidel, Hans. Invasion 1944. Chicago: Henry Regnery Company, 1950.

- Taylor, Griffith. Urban Geography. New York: E. P. Dutton and Company, Inc., 1946.
- Tully, Andrew. Berlin: Story of a Battle. New York: Simon and Schuster, 1963.
- von Manstein, Erich. Lost Victories. Chicago: Henry Regnery Company, 1958.
- von Mellenthin, F. W. Panzer Battles. Norman: University of Oklahoma Press, 1955.
- Werstein, Irving. The Battle of Aachen. New York: Thomas Y. Crowell Company, 1962.
- Werth, Alexander. The Year of Stalingrad. New York: Alfred A. Knopf, 1947.
- Westphal, Siegfried. The German Army in the West. London: Cassell and Company Ltd., 1951.

#### Public Documents

- Blumenson, Martin. United States Army in World War II: European Theater of Operations: Breakout and Pursuit. Washington: Office, Chief of Military History, Department of the Army, 1961.
- MacDonald, Charles. United States Army in World War II: European Theater of Operations: The Siegfried Line Campaign. Washington: Office, Chief of Military History, Department of the Army, 1963.
- U.S. Army Command and General Staff College. U.S. Army Command and General Staff College Special Text ST 100-15-1 Field Service Regulations, Larger Units. Fort Leavenworth: U.S. Army Command and General Staff College, 1963.
- U.S. Department of the Army. Department of the Army Field Manual FM 41-10 Civil Affairs Operations. Washington: Department of the Army, 1962.
- U.S. Department of the Army. Department of the Army Field Manual FM 61-100 The Division. Washington: Department of the Army, 1963.
- U.S. Department of the Army. Department of the Army Field Manual FM 100-5 Field Service Regulations - Operations. Washington: Department of the Army, 1962.

U.S. Department of the Army. Department of the Army Field Manual FM 27-10 The Law of Land Warfare. Washington: Department of the Army, 1956.

U.S. Department of the Army. Department of the Army Field Manual FM 101-5 Staff Officers Field Manual - Staff Organization and Procedure. Washington: Department of the Army, 1960.

#### Unpublished Materials

Blumentritt, Guenther. "Defense." Office of the Chief Historian, European Command, nd.

Denkert, Walter. "The 3 Panzer Grenadier Division in the Battle of Aachen." Heidelberg: Historical Division, United States Army, Europe, n.d.

83d Infantry Division. "After Action Report, August 1944."

Engel, Gerhard. "12th Infantry Division (22Sep-22Oct44)." Heidelberg: Historical Division, United States Army, Europe, n.d.

Fahrmbacher, Wilhelm. "Background and Development of the Atlantic Wall in the Brittany Area." Heidelberg: Historical Division, United States Army, Europe, n.d.

I.P.W. Team #53. "Report." Annex #3 to G-2 Periodic Report #23, 6th Armored Division, 20 August 1944.

Kirchheimer, Joseph M. "Observer Report, ETO, 11 August - 1 October 1944." Washington: Headquarters Army Ground Forces, Army War College, 1944.

Koechling, Friedrich. "The Battle of the Aachen Sector (September - November 1944)." Heidelberg: Historical Division, United States Army, Europe, 1945.

Mahlmann, Paul. "353 Infantry Division (24 July - 14 September 1944) Report of the Commander." Heidelberg: Historical Division, United States Army, Europe, n.d.

Schack, Friedrich. "LXXXI Corps (4-21 September 1944)." Heidelberg: Historical Division, United States Army, Europe, n.d.

Schramm, Percy Ernst. "The German Wehrmacht in the Last Days of the War." Heidelberg: Historical Division, United States Army, Europe, n.d., Pt. II.

- Schulz, Friedrich. "Battle for Crimea." Heidelberg: Historical Division, United States Army, Europe, 1954.
- Schulz, Friedrich. "Reverses on the Southern Wing (1942-1943)." Heidelberg: Historical Division, United States Army, Europe, n.d.
- Thomas, Wilhelm. "The Capture of Smolensk by the 71st Motorized Infantry Regiment on 15 July 1941." Office of the Chief Historian, European Command, 1947.
- United States Military Academy. "Operations on the Russian Front." West Point: United States Military Academy, 1948, Pt. 1.
- United States Military Academy. "Operations on the Russian Front." West Point: United States Military Academy, 1948, Pt. 2.
- Vaterodt, Franz. "Preparations for the Defense of the Town of Strasbourg in the Year 1944, and the Battle for Strasbourg (23-25 November 1944)." Heidelberg: Historical Division, United States Army, Europe, 1947.
- von Buenau, Rudolf. "The Defense of Vienna (29 March - 16 April, 1945)." Heidelberg, Historical Division, United States Army, Europe, 1954.
- Westphal Siegfried. "Answers to Questions Asked General Westphal." Heidelberg: Historical Division, United States Army, Europe, 1954.
- Willemer, Wilhelm. "The German Defense of Berlin." Heidelberg: Historical Division, United States Army, Europe, 1953.
- Zimmermann, Bodo. "OB WEST, Atlantic Wall to Siegfried Line, A Study in Command." Historical Division, European Command, 1946.



**REPORT DOCUMENTATION PAGE**Form Approved  
OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

<b>1. AGENCY USE ONLY (Leave blank)</b>		<b>2. REPORT DATE</b> 15 May 1964	<b>3. REPORT TYPE AND DATES COVERED</b> Master's Thesis August 1963 - May 1964	
<b>4. TITLE AND SUBTITLE</b> A DOCTRINE FOR DEFENSE OF A MAJOR URBAN POPULATION CENTER BY DIVISION AND LARGER UNITS			<b>5. FUNDING NUMBERS</b>	
<b>6. AUTHOR(S)</b> Sawyer, Richard H., Major, U.S. Army				
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> U.S. Army Command and General Staff College 1 Reynolds Ave. Fort Leavenworth, KS 66027			<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>	
<b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b>			<b>10. SPONSORING / MONITORING AGENCY REPORT NUMBER</b>	
<b>11. SUPPLEMENTARY NOTES</b>				
<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b> Approved for public release; distribution is unlimited.			<b>12b. DISTRIBUTION CODE</b> A	
<b>13. ABSTRACT (Maximum 200 Words)</b> This thesis develops a doctrine for defense of a major population center by division and larger units. The scope of the paper is limited to ground operations. Limited use of tactical special weapons and airborne and air assault techniques is considered briefly. The thesis examines the battles for Aachen, Berlin, the Brittany fortresses, and Stalingrad in considerable detail, and the battles for Sevastopol, Smolensk, Strasbourg, and Vienna less intensively. Elements of common doctrine in personnel, logistics, civil affairs, intelligence, and plans and operations are generated. Three competing schemes of maneuver are developed. A final consolidated doctrine is enunciated.				
<b>14. SUBJECT TERMS</b> World War II; Urban warfare;			<b>15. NUMBER OF PAGES</b> 212	
			<b>16. PRICE CODE</b>	
<b>17. SECURITY CLASSIFICATION OF REPORT</b> U	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b> U	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b> U	<b>20. LIMITATION OF ABSTRACT</b> A	